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AND TO

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UTENSILS, &c.

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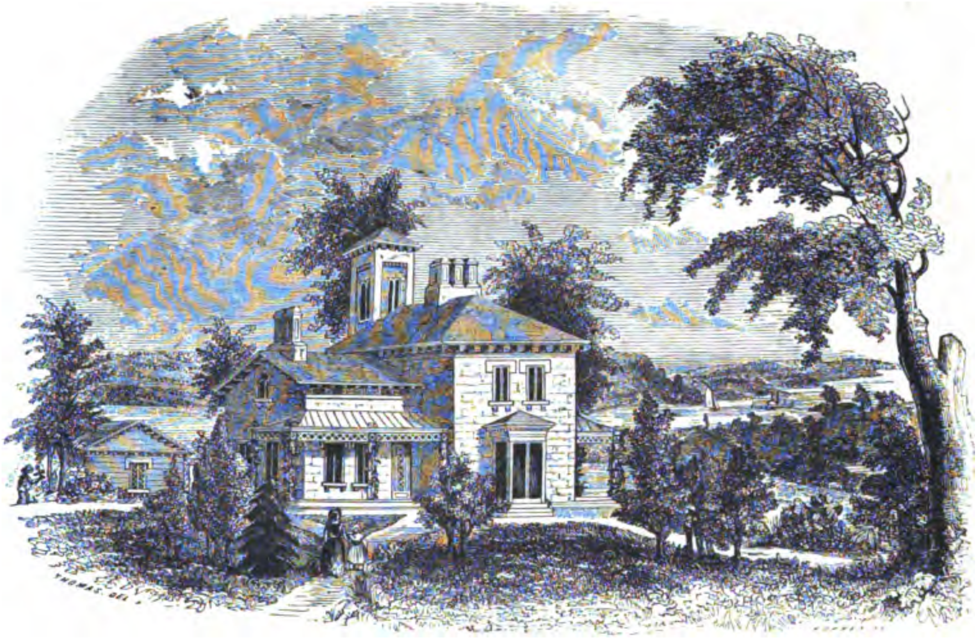


HOPE COTTAGE.

[Cultivator, Jan., 1848.]

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, JANUARY, 1848. No. 1.

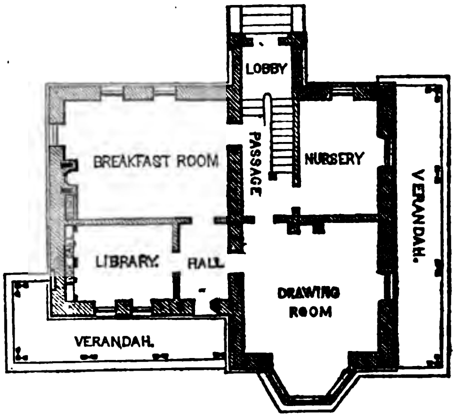
RURAL ARCHITECTURE—HOPE COTTAGE.

"THERE is nothing," observes A. J. DOWNING, "that more powerfully affects the tastes and habits of a family—especially the younger members of it—than the house in which it lives. An uncouth, squalid habitation, is little likely to awaken that attachment to home, that love of good order, and that sense of propriety and elegance in social deportment, which are so much promoted, so much developed, by that home where a certain proportion, a certain fitness, and a sense of beauty, are everwhere visible."

With such views as these, every observing person must hail with much satisfaction, the great improvement, within the past few years, in country architecture. A rapid change for the better, in the adoption of styles adapted to rural and picturesque scenery, has taken place throughout the country. Inexpressive square blocks, and right-angled parallelograms, are yielding to the more free and tasteful erections in neat Gothic and Italian. The stately and formal Grecian, formerly considered the utmost limit of perfection for a country dwelling, has had its day. It may, indeed, do very well for the compact city, and is admirably fitted for the ambitious capitol, or the massive banking house. It may also suit the stiff, geometric style of planting; but this mode of planting has long since given place to the infinitely superior manner of imitating the graceful and picturesque in nature. The Gothic and Italian are divested of formality, and the ease with which the outlines of buildings in these two styles may be broken and varied, render them perfectly adapted to modern landscape gardening, and to maintain that harmony which should exist between buildings and the surrounding grounds.

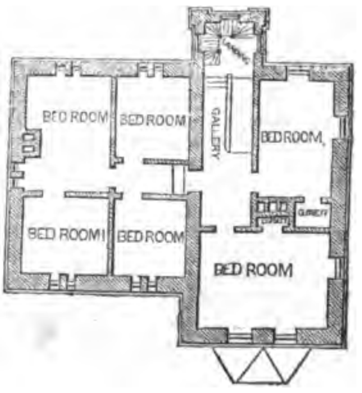
On the ground of strict utility, these modes possess peculiar advantages for rural erections. The convenient juxtaposition of rooms, in Grecian buildings, is often sacrificed to exterior uniformity. But in these, what is regarded as a defect in the Grecian, becomes, in judicious hands, a source of real beauty, by affording a varied and picturesque outline against the sky.

In so rapid an introduction of these new styles, it was not to be expected that every one should at once fully appreciate their peculiar characteristics. Vague and undefined notions must at first exist when a subject entirely new engages the attention. Hence we are not surprised to see many examples of bad taste; the plain, simple, and chaste, being excluded by a profusion of gingerbread work, and fantastic and unmeaning decoration. A more thorough knowledge of correct principles in architecture of this kind, will gradually dissipate these defects; and appropriate and tasteful ornament be only sparingly introduced, instead of superfluous and flimsy carvings. This change, which has already made great advances, promises a most pleasing improvement in the scenery of our country; when true taste, without increase in cost, shall be exhibited in neat cottages, as well as in farm houses and mansions.



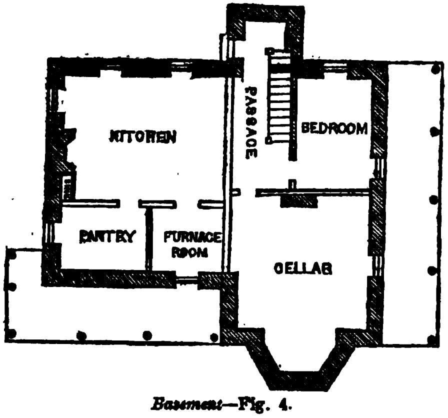
Principal Floor—Fig. 2.

For the purpose of inviting more particular attention to the Italian style of architecture, we have selected for a frontispiece to our present number, a view of "Hope Cottage," one of four, recently erected by



Second Floor—Fig. 3.

E. P. PRENTICE, Esq., on his estate at Mount Hope, on the west bank of the Hudson, just below this city. Almost exclusive attention has been given hitherto to the Gothic style, by those erecting country residences according to the principles of taste and picturesque



Basement—Fig. 4.

beauty. We believe, however, that the merits of the Italian mode of building, are peculiarly adapted to our country; for while it possesses entire freedom from the stiffness of the Grecian, and admits of every variety of outline, it surpasses the Gothic in the simplicity of finish and expression of utility, which is so desirable, and in accordance with our republican character. This cottage was built from a design furnished by Mr. Geo. Penchard, an architect of much taste and skill, of this city. Figs. 2, 3, and 4, give plans of the several floors, and require no explanation.

The other three cottages, alluded to above, were erected the past season, from designs by the same architect. One is in the Tuscan, one in the English rural Gothic, and the other in the Swiss style. The latter is a very beautiful specimen of its kind. It is covered on the sides with pointed shingles; balustrades extend around the two prominent sides on a level with the principal floor, and across the front on the second floor, both supported by brackets; while its broad and shadowy eaves give a most interesting expression to the whole.[*]

Fine-Wooled Sheep in the Valley of the Ohio.

Editors Cultivator—Having seen frequent notices of the flocks of fine-wooled sheep in Western Virginia, Western Pennsylvania, and the eastern portions of Ohio, I thought that an account of the origin of some of those flocks, might be acceptable to the readers of the Cultivator. I deem the history of those flocks of more consequence, as it throws some light on the general subject of improving the fineness and quality of wool. I believe the eastern manufacturers consider the wool of this section equal in quality to any produced in the country.

Most of the fine flocks in this section, were originally derived from the celebrated flock of the late W. R. Dickinson, of the firm of Wells & Dickinson, of Steubenville, Ohio; and as the origin and history of this flock seems not to be generally known, I have taken some pains to ascertain it, and have embodied the main facts relating to it in the following account.

I would state, in the first place, that at the time of the large importations of Saxon sheep, in 1825 and 1826, it was stated by those who were acquainted with Mr. Dickinson's flock, that he had sheep which produced as fine wool as any of the imported Saxons, and at the same time their fleeces were much heavier. In 1826 an opportunity of testing this point was presented. The Maryland Agricultural Society offered a special premium in the following words:—" To the owner of the ram which, being shorn on the ground, [of exhibition,] shall produce the greatest quantity of pick-lock wool." The competition was free for the Union. The exhibition was held near Baltimore, on the 1st and 2d of June of the year above-mentioned. The first premium was awarded to Mr. Dickinson, for a ram which he sent from Steubenville purposely for this trial. Wm. Patterson, of Baltimore, received a second premium for a Saxon ram, whose wool was said by the committee to be " a *shade* finer" than Mr. D.'s, but fell considerably short in quantity.

In a letter dated Steubenville, Ohio, May 22, 1826, published in the *American Farmer*, vol. viii, page 81, Mr. Dickinson states that he purchased the foundation of his flock from James Caldwell, Pennsylvania, who was an extensive breeder of Merinos. He commenced the business at an early day, having in 1806 purchased a ram and two ewes from Col. Humphrey's flock. He expended more than forty thousand dollars in purchasing, to use the language of Mr. Dickinson, " the *cream* of almost every importation from Spain during the invasion of that country by the French." Mr. Caldwell accumulated a large flock, which, after the peace of 1815, was principally sold to Messrs. Howell, of New Jersey, who subsequently transferred it to Mr. Dickinson.

The letter of Mr. D. to the *American Farmer*, above-mentioned, is accompanied by one he had received from Mr. Caldwell, from which, as it furnishes a clear account of the origin of Mr. D.'s flock, and contains, besides, very important and valuable observations in relation to breeding sheep, I have thought proper to make the following extracts. Mr. C.'s letter is dated Philadelphia, April 11, 1826. He says :—

" In the fall of 1806, I purchased one ram and two ewes from Col. Humphrey's Merino flock, for which I paid $300. This ram was accidentally killed a short time after, and in the spring of 1807, Mr. Basse Muller imported into Philadelphia six Merino sheep, which he said had been obtained by him from the flock of the Prince of Hesse Cassel. The sheep were all remarkably fine animals, and at Mr. Muller's request I took them to my farm, and kept them till they had recovered from the effects of the voyage, and were in a condition to travel. I then prevailed on Mr. Muller to let me have one of these rams, and to name his own price. He consented to do this as a personal favor, and did not consider it *a sale* when he named $100 as about sufficient to defray the additional cost and charges. The sum was paid by me with great satisfaction, although at that time I would rather have had a ram of equal quality *directly* from Spain; thinking it best to procure the water from the *fountain head*, as less liable to impurities than farther down the stream. A sheep seven-eighths Merino *may have* all the external qualifications of a full-blood Merino; but no experienced breeder would think it equally safe or desirable to breed from such an animal, when the genuine full-blood can be obtained. I would prefer one of the best horses of Arabia for *speed and bottom*, to the most beautiful English racer, if I desired to propagate and *perpetuate* those qualities. And *even now*, I would rather cross with the best Spanish ram, than with the best Saxon

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[*] One of the finest specimens of Gothic in the State, is the large and substantial mansion of Robert B. Howland of Union Springs, Cayuga co., now nearly completed. It is built of stone, and every part of the most durable materials, all the roofs being of galvanized iron. It commands a view of Cayuga lake, at one of its most beautiful points of scenery.

Merino, unless I *knew* that the Merino had been kept pure and *unmixed* in Saxony. *The contrary* practice would be gradually but certainly breeding back again into the common stock of the country. I have, however, every reason to believe, that the sheep imported by Mr. Muller were perfectly pure Merinos; and I think Columbus [a noted ram] was the first descendant from Muller's ram, and one of Col. Humphrey's ewes. You are certainly wrong in thinking Columbus was the best ram in my flock. It was Americus that sheared 12¼ lbs. of wool which I sold for $25 cash. It was Americus that weighed 148 lbs. Americus was begotten by Columbus, and was, in my opinion, in all respects a superior sheep. I now think that Americus was the best Merino ram I have ever met with, although I have travelled from Boston to Alexandria for the purpose of examining all the early importations from Spain, and of purchasing the best I could find.

"I have expended more than $40,000 upon Merino sheep, but never could find one equal to Americus in every respect. I do not remember the weight of Columbus; but his fleece never weighed more than 9¼ lbs., which I sold for $2 per lb. Mr. Howell gave me $300 for Columbus, at a time when the best imported Spanish rams were to be had for $50. The same Mr. Howell gave me *five hundred dollars* for Americus. I presume you have mistaken these two sheep."

There cannot be a doubt that Mr. Dickinson rendered the section where he was located, very important service by the introduction and disseminatien of his valuable stock of sheep. It will be seen by Mr. Caldwell's letter, that these sheep had not only *fine* wool, but that they produced very heavy fleeces—the ram Columbus having sheared 9¼ lbs. at a clip, and Americus 12¼ lbs.; and the wool of both was of such excellent quality that it readily commanded $2 per lb., cash. The fleeces were unquestionably washed, or they would not have brought such a price. It is true that this was at an early day, when fine-wool was comparatively scarce, but the price is, nevertheless, an indication of superior quality.

In the *American Farmer*, vol. vii, page 331, there is a communication under date of Dec. 23, 1825, from John McDowell, Steubenville, Ohio, in reference to some samples of wool which he had sent to Mr. Skinner, then the editor of that publication. The samples were taken from Mr. McD.'s flock, which he states was derived from Mr. Dickinson, and the quality of the wool was stated to be such that Mr. McD. obtained "*eighty cents per pound for the lot* [about 400 fleeces] *in the dirt*." Mr. McD. observes that "the country is more indebted to Mr. Dickinson than to any other man in it, for the present standing of the Merino sheep; for when they were at the lowest ebb, perfectly degraded, and suffered to be adulterated, and destroyed in every manner, he meted to them the strictest attention, and retained them entirely pure, and for many years supplied all the flocks of the west with full-bred bucks." In relation to the samples of wool and Mr. Dickinson's flock, the editor of the publication referred to remarks, that he believes Mr. D. could "select from his flock individual rams and ewes in as great number, and with fleeces as fine, as can be found in any flock of like number in any country."

John H. Ewing, Washington, Pa., speaking of the introduction of Merino sheep into that section, says:—"But of those most distinguished for their efforts, Messrs. Wells & Dickinson, of Steubenville, are entitled to the greatest credit. They made great progress in wool-improvement, and spent a fortune to establish their purpose, and in establishing its manufacture." [*Amer. Shepherd*, page 414.

The chief point to which I wish to call attention, in relation to this subject, is, that Mr. Dickinson obtained the remarkable fineness of wool for which his sheep became noted, principally by his own good management. With the exception of the ram from Hesse Cassel, above-mentioned, his flock appears to have originated from Spanish sheep of various importations. He observed great care in his selections, and in that way, and by bestowing proper treatment on his sheep at all times, he continually improved the general quality of their wool; and in this he gave an example which other wool-growers might profitably imitate.

In a future article, I will endeavor to give some notice of the most celebrated flocks in this section. R. W.
Wellsburg, Va., Nov. 23, 1847.

Domestic Economy, Recipes, &c.

Preserving Grapes in Winter.—W. Williams, near New-York city, describes, in the Horticulturist, two modes of preserving Isabella and Catawba grapes: the first for early winter use; the second for late winter and spring—he has kept them quite sound till April.

The first mode consists simply of depositing the grapes in single layers on shelves with light wooden latice bottoms, arranged within his ice-house.

The second is packing them in boxes, which are of rather small size, (about 1 peck each,) such as may be opened once a week, as wanted for use. As these are for longer keeping, the grapes are gathered, before fully ripe, on a dry windy day, and packed away perfectly dry. They are lined first with paper, and then with cotton, and cotton is placed between every layer of grapes till the box is full. They are then covered with cotton, and the cover fastened down with nails or otherwise. It is found that decay takes place slower when the air is not entirely excluded.

Curing Beef.—By most of the modes now in use, the beef becomes too much impregnated with salt, and is not as a consequence so fine for eating. By the following process this difficulty is prevented, and the beef will keep till the following summer: To 8 gallons of water, add 2 lbs. of brown sugar, 1 quart of molasses, 4 oz. of nitre, and fine salt till it will float an egg. This is enough for 2 common quarters of beef. It has been repeatedly tried and found very fine; a famous beef eater says it is the only good way.

To extinguish Chimneys on Fire.—"First shut the doors and windows of the room containing the fire; stop up the flue of the chimney with a piece of wet carpet or blanket; and then throw a little water or common salt on the fire. By this means the draught of the chimney will be checked, and the burning soot will soon be extinguished for want of air. Let this be remembered by the reader."

Fattening Poultry.—An excellent way is to boil potatoes, and mash them fine, then add meal, just before the food is given to them. It is asserted that turkeys, geese, and other fowls, will thus fatten in one half the time usually required when they are fed on grain alone.

Age of Poultry.—Those who purchase poultry will observe, that if a hen's spur is *hard*, and the scales on the legs *rough*, she is old. If the head is on, the comb will be thick and rough, and the under bill stiff, and hard to bend down. A young hen has only rudiments of spurs, scales on the legs smooth, and fresh, claws tender and short, under bill short, comb thin and smooth. The same remarks, as to the legs, apply in part to turkeys and to geese.

Water proof Glue.—Render glue perfectly soft, but not liquid, in cold water; then dissolve it by gentle heat, in linseed oil. It dries almost immediately, and water will not affect it.

MAKING, SAVING AND APPLICATION OF MANURE.

MESSRS. EDITORS—I have something further to offer, in continuation of my remarks published in the November number of the Cultivator, upon the subject of "making and saving manure." They may appear somewhat *racy*, but yet, I fancy, they will be found to have a practical bearing upon this important matter.

In the November number, I remarked that my breaking up of sward land is done in November. I will be more particular in stating my reasons :—Besides other reasons that might be named, the frosts of winter so pulverise the surface of the inverted furrows, that I can the more easily bury the dressing of compost that is applied in the spring to a suitable depth without disturbing the sod. The harrow is put on first, after spreading the manure, which distributes it more equally over *all* the land, and finally divides the loose earth above the sod, so that when the plow is put in, the roller on the beam being gauged to the right depth, the manure can be buried three to four inches, which is, in my opinion, about the right depth for compost.

By this mode of practice, my corn crops are always heavy. Five years since I broke up a field of ten acres in November, nine inches deep, and in the spring applied forty-two-horse loads per acre, of a compost of two loads of muck to one of stable manure, and planted it to corn. This field averaged eighty-five two bushel baskets of ears to the acre. The crop of oats following was very heavy, as have also been those of grass. I have mowed this field three years, and one raking on a side with a hand rake, makes as large a winrow as can be managed. The year previous a field of five acres, managed in the same way, averaged over ninety bushels of corn per acre.

In speaking of the hog-pen, I might have added, that where practicable, it should be located so as to receive the manure from the horse stable. My hog-pen is situated under the horse stable windows, and the manure of two horses is thrown into it. Horse manure, if left in heaps by itself, becomes almost worthless by overheating; but if thrown into a hog yard there is no danger of over fermentation, for the hogs keep it continually moving, and they also mix it up thoroughly with the other materials in the yard.

Among other materials that may profitably be gathered for manure, I mentioned in my November article, that the accumulation of leaves and vegetable mould, in the hollows and at the foot of hills in woodlands, are good. In the month of November, I dig from these places, with stout hoes made for the purpose, a quantity of this material, and with wheel-barrows put it into a large heap or heaps, so that I can get at it with a sled in the winter—being exceedingly light, it will not freeze more than two or three inches deep, and if a deep snow lays on the heap it will not freeze at all. This is sleded home, a few loads at a time, and put into empty stalls, or in one corner of the shed, and used for bedding the cattle. In the morning, after the stables are cleaned out, a bushel basket or so of this material is put under each animal, and a little straw sprinkled over it. The next morning the leaves and black mould will be quite wet with urine, and this, with the solid excrements, is thrown out of the window. If the windows have a southern exposure, a snow storm of a foot in depth will not lay on these heaps twenty-four hours, owing to the powerful fermentation produced upon this vegetable matter by the urine with which it is saturated. I find this to be the very best manure I make, and although attended with some extra labor, it comes at a season of the year when it can generally be done about as well as not. In travelling the country, how many valuable deposits of this kind you will see, Messrs. Editors, where a stone wall or a Virginia fence borders a wood-lot, and that perhaps a side hill, where the accumulation has been going on for years unheeded by the owner!

In my former communication, I remarked, that lime or ashes make an excellent compost with muck, and gave an example of the value of lime and muck. I can speak in equally as high terms of ashes and muck, a compost which I have repeatedly used. A few years since, I tried what amounted to an exact experiment with this compost without originally designing it. A friend sent me a few ears of a new variety of corn, and as it did not come to hand until after my land was all planted, I took it to a distant lot where then at work, and loaded up a half cord of manure from the bottom of a stable window heap, thinking that this would give each hill a large shovelful. It only answered for about half the corn, however, and as I had a heap of muck and ashes near by, that had been recently laid up, I directed an equal quantity of this compost to be used in the remaining hills, in order to mark the result. Until July the corn treated with manure was manifestly the best, but after that the scale began to turn, and in the fall the corn dressed with the muck and ashes was much the heaviest—so much so that the difference was perceptible at quite a distance.

I have now done with this subject, Messrs. Editors, for the present; but I hope it will be followed up by other correspondents of the Cultivator.

The subject of making manure is an old one, upon which much has been written during the last few years; but this does not hinder that it should be necessary and profitable to us all to be reminded of its importance over and over again. Indeed it may truly be said to be *the practical subject of all others*, connected with farming.

I think I am warranted in saying, that a large portion of the farms, in New England at least, are still annually decreasing in fertility from the want of proper attention to this very business of making and saving manure.

You have acquitted yourselves nobly in this matter, in your volume for 1847. The editorial articles on manure alone in Vol. IV, are richly worth more than the price of the volume. I am compelled to say to your correspondents, however, that this matter ought to be oftener the subject of communications from them. There are many, very many, excellent, practical farmers in the list of your frequent correspondents, whose ideas and practice connected with this subject would be highly instructive and useful, if made known. "Help one another," should be the motto in the agricultural profession, where so much is yet to be learned. We want light in our profession—especially the light elicited from the *practice* of this profession by our intelligent, practical farmers. F. HOLBROOK.

Brattleboro, Vt., Nov. 10, 1847.

WINTER-KILLED WHEAT.—Wm. Little, in the Ohio Cultivator, says that his late sown wheat on corn ground, was much "winter-killed," that is, thrown out by frost, which he chiefly remedied by using a heavy roller, pressing the half-killed roots into the ground, which caused them again to vegetate. Such wheat yielded about 20 bushels per acre.

REMARKS ON BREEDING HORSES.

Editors of the Cultivator—I am perhaps only one among a thousand, who have read attentively the articles recently published in the Cultivator, entitled "Breeding Horses," and signed "Equus." I think them well prepared, and worthy of your paper; and though I am not quite sure that they were written by a practical breeder, or even an experienced horseman, I cannot doubt that the author of them is an intelligent man, and one who has devoted much time and reflection to the investigation of his subject.

I do not agree with him fully, however, nor do I know that I disagree with him entirely. He is hardly plain enough. I do not know whether he means to advocate or oppose the breeding from thorough bred stallions. I am inclined, however, to interpret his articles as against the practice of resorting to thorough breds. He seems to be privately inclined to take the breeds we have already in our country—such as the Morgan, the Narraganset, the Canadian, perhaps, and the descendants of Messenger and Duroc, and breed them among themselves, to establish a sort of home breed—a kind of "horse of all work." If so, perhaps he is right; though my opinion is he is wrong. And as different opinions sometimes lead us to correct conclusions, I hope you and your readers will indulge me while offering mine.

In the first place, then, permit me to say, that this idea of a "horse of all work," which has been so long held up by our Fair Committees and our Agricultural writers, if not altogether an abstraction, is by no means the ultimatum to be sought by all good breeders. I am confident it has misled many, and that it is still exerting a bad influence. My view is, that the existence of different species of horses, naturally suggests the idea that they were designed for separate and different purposes—and that to combine the excellencies of all in one new and distinct species is, to say the least, by far the most difficult problem of breeding—and one too, which, in my opinion, would never repay the cost of its solution.

Besides, I have never yet seen the necessity of this "horse of all work," whatever he may be, nor do I know that when he shall be produced (if he ever shall be) that we will esteem him more among horses, than we do a "jack of all trades" among men.

I would then here advise, that every person who sets out to breed horses, should first determine with himself which of the various species he would produce. I have no doubt I will be met here with the objection, that in our country we are not yet prepared for the breeding of different horses for different purposes—that this may be done only in England, and the older countries of Europe. But here I frankly take issue with the objector, and maintain that we have already a demand in our own country for three or four distinct species of horses. And first I would mention the carriage-horse, which is much inquired for in all our large cities. This is a large, stately animal, with a long arching neck, and lofty carriage; not required to do much trying service, used chiefly to drive about the city at a slow pace, to take the ladies a calling or a shopping; is seldom in harness more than two hours at a time, and seldom out of the stable more than twice in a day. He is not required to possess any great degree of hardiness, but must have tough feet, and general symmetry of form, though a little legginess, or a little too much length of carcass, will not be serious objections. What is chiefly sought, is a proud step and a noble figure, corresponding with the massive coach, and the costly equipage.

In addition to the carriage horse, there is the smaller, more graceful, more elegant, higher bred horse, suitable for the curricle or the saddle. Still it must be confessed, that though occasionally horses of this description may be sold at high prices, for ladies' saddle horses, and for the use of riding schools, &c., yet there is not so great or so constant a demand for them as for those we have first described. This arises from the fact that the young men of our country do not delight in the saddle as they should; and I cannot pass this opportunity for expressing my earnest wish that the eloquent rebuke which they received from Charles Henry Hall, in his able report to the State Society at Saratoga, will be felt and improved, so that before this generation even passes, the high mettled, almost thorough bred saddle horse, will command as many purchasers and as high prices as any other horse in market.

In addition also to these, there is in all our cities, and I might also say in all our country, a great demand for the more plebian—no matter what sort of a looking—dash away—three-minute trotting horse, used for the saddle, the sulkey, or the wagon.

And again, there is the straight-shouldered, broad-breasted, heavy quartered, large-boned draft horse, used by the brewers, the colliers and the carmen. Now I maintain that in all our large cities, several kinds of horses exist separately, are used separately, are bought separately, and consequently should be bred separately.

Will it be said that it is not wise to breed horses exclusively for our large cities—that we should look for a wider market, and hence the necessity of crossing, with a view of supplying the demand of the country at large for "horses of all work"—such as will be suitable for the farm, the carriage, the buggy, the saddle, and all? I answer, that if by this is meant we should seek to breed only a fair, common horse, not superior in any feature, but respectable enough in all, I will not wrestle with the objector, but confidently submit the question to the good judgment of your readers. But if on the other hand it is meant, that we should strive to produce a horse of such perfection that he will be equally superior in each department of service, and thus suit every purchaser, I will repeat the opinion, that this, if practicable, is an object too difficult of attainment to be profitable. Indeed, I will go farther, and insist that this would be an object virtually impracticable, because, in all probability, it would be thwarted as soon as attained: for such a horse, instead of remaining in the hands of the farmer, the mechanic, or even the villager of fortune, and used to promiscuous service, would undoubtedly command a price that would transfer him to the stables of some retired merchant or wealthy gentleman, of one of our large cities, where he would be exclusively devoted to one particular department of service, so that after all the expense and pains of breeding him a "horse of *all* work," he would in fact live and die a horse of *one* work.

But perhaps the reader, weary of the argument, is willing to indulge me in the opinion that it is better to breed horses separately, with a view of obtaining the higher prices offered in our city markets. But with the admission he asks, how is it to be effected? I answer that it is difficult indeed for any man to lay down any definite or certain rules in the matter, and I am by no means prepared to go any farther than to offer a few ideas on the subject, for which I shall claim no other authority than that which shall be accorded to them by the good sense of your readers.

If then, for instance, it is required to breed a carriage horse for the city market, I would in the first place advise the breeder to use great care in the selection of the mare. It will not be enough even, that the animal possesses in herself the main characteristics desired in her progeny; it is necessary also that her whole family—dam, sire, brothers, sisters and all—shall possess them in their main features. She should be an animal, seven or eight, or nine years old, every way sound; should have a fine long arching neck, a sleek coat, a docile temper, short legs, heavy bones, body long and deep, rather compact than loose. I would not have her ribbed up too closely, for this is objectionable in either mare or horse, but a mare should be rather close than otherwise, because this is desirable in her foals; and if there is sufficient length and depth of carcass, there is no danger but the colt will be large enough, though the dam be quite well ribbed up. The mare should have close, good action, a prominent eye, a deep flank, *large milk veins*, and a thick mane and tail; and as I said before, these should be the general characteristics of the family from which she sprung.

Having secured such a mare, or one similar, (which I can assure the breeder will be a work of patience and expense,) he should send her to a thorough bred horse—by all means to a thorough bred—one of the thoroughest of the thorough breds—not a mere gaunt, *scrawny* race horse, whose dams and sires for four or five generations previous, have never got a foal until after they were worn out on the course; but he should send to a *right gallant* thorough bred—one that takes after the old patriarchs of his family—that is staunch and sound, with plenty of bone and substance, and all the resoluteness of action consistent with docility and good temper.

If, after following to any reasonable extent, these directions, any man shall breed mean animals, I will cheerfully throw up my theory, and at once turn my attention to the breeding of mules and oxen. Perhaps, indeed, the immediate result may not be *all* the breeder may desire—perhaps by breeding from one of her selected half bloods he may improve upon his first generation, by obtaining better mares, or rather mares more assimilated to the thorough bred with which he started—perhaps, too, he may produce mares from the selected half blood, that will breed with more certainty and sufficient fineness from other half bred stallions. But I am sure he must return in season to the family of his original thorough bred, or one similar to it, or otherwise his stock will inevitably degenerate. I would give similar directions for the breeding of some of the other species of horses mentioned above, but this article is already too long, and if more shall be said, it must be said at another time.

Syracuse, Nov. 1847. JOHN BARBER BURNET.

NOTES OF A TRAVELLER IN GREAT BRITAIN—No. 8.

AGRICULTURE OF WALES.—The agriculture of Anglesea, in some parts, is in a very advanced state. Many of the estates of the landlords and gentlemen, are in a very high state of cultivation. That of Hon. W. Owen Stanley, member of Parliament, near Holy Head, is under very excellent and even superior tillage and cropping, equal to almost any seen in England. His walls and hedges are in admirable order, and every thing betokens the gentleman of taste, as well as agricultural skill. The domain of the Marquis of Anglesea, near Menai Bridge, also evidences great care and attention; and shows that right directed effort in Anglesea, will secure results equally satisfactory to those made in other portions of the Kingdom. Most of the farms are of medium size—varying from sixty to three hundred acres. The system of tithes, which for years caused great disquietude in North Wales, and had a very injurious tendency upon the improvement of the country, has been changed to a commutation, which has proved, I am told, very beneficial. The tenant is now at liberty to make improvements, and realize to himself all the benefits resulting from them, instead of sharing, as heretofore, in the profits with the landlords, while all the expenses were borne by himself. There are still various restrictions in their leases, some of which are very unwise, and alike injurious both to landlord and tenant. The right of gaming, which is preserved on most of the estates, by which the landlord has the exclusive privilege of hunting, and the tenant is prohibited, under heavy penalties, from destroying the game, however injurious to his crops. Observing in a grass field, where some laborers were mowing, that the grass had been very much injured by the passage of hares through it, I inquired of the farmer why he did not kill them. His reply was, that the law was quite as severe for killing a hare as for felony, and that he was forced to submit to these depredations upon his crops year after year. In many of their leases there is a clause binding the tenants, on each farm, to keep two hunting dogs for the landlord, and to have them ready when the season for hunting arrives. They are collected from the different farms to the game-keeper's quarters, where a fine building is erected, far superior to the cottages of the Welsh tenantry—lodgings for game-keeper and grooms, stables for horses, granary, fine quarters for the hounds, large iron kettles to cook provisions for them, slaughter-houses where the old horses are killed, and every other convenience necessary for the landlord and his friends. When the day for hunting arrives, they go forth over the lands, without regard to crops, and frequently very great injury results to the tenant, and for which he has no redress.

The implements of husbandry are in general quite rude. The Scotch plow, however, is used, and the work is generally well performed. The principal crops raised in Anglesea, are oats, barley, rye, wheat, peas, potatoes, turneps. There is a great objection among farmers to buy for their own consumption, and they raise a variety of crops, though some of them do not realize very satisfactory returns. The weeding of crops is practiced to some extent as in England, and many of their fields present a very neat and clean appearance. There are different methods practiced in sowing wheat. Drilling to some extent is adopted; but broadcast sowing on the furrow, I should think the most common. In gathering the wheat, the reaping hook is most generally used. Sometimes the grain is cut with the scythe, and the cradle is occasionally used. An opinion still prevails among the ignorant, that cradling grain is *forbidden* in scripture, though I did not learn in what part of the Bible the prohibition could be found.

Of their grass crop, the yield when I was there, was very light, and their meadows would almost realise what has been said of Wales—" That a man may mow in them all day, and carry home his day's math at night." I was told that, in some meadows, the mark of the swath continues from year to year, and on some farms I should think, from the appearance, that there could be no doubt but it is so. Their implements for mowing are very rude and awkward. A straight and clumsy snath, very broad scythe, secured at the bottom of the snath with an iron rod from the snath to the back of the scythe. This, however, is deemed the apparatus best for their lands. A Welshman who had lived with me in America, and who was a very expert mower with one of our patent snaths, told me he could do twice as much, when I saw him mowing in Wales, if he had his old snath and scythe. I have no doubt he could do so, from a trial I made with the Welsh implements.

As a substitute for grass, they use *Gorse* as a food for their stock. This has been in use in Anglesea, and some other districts in North Wales, from time immemorial, as a food for horses. It has occasionally been used, when provender is scarce, for horned cattle. When used, either by itself or with provender, as food for milch cows, it proves highly beneficial. It is a coarse evergreen shrub, growing to the height of two or three feet generally, and propagates itself. It gives to milk and butter a fine color and rich flavor. It is the opinion, that cows yield a better profit than when fed on the best grass or even turneps. The butter is certainly most excellent, as I had an opportunity of testing, equal certainly, if not superior, to any I ever tasted. It is fed to some extent, with turneps, to sheep. Its principal use, however, is in feeding horses. It grows abundantly in all parts of Anglesea, and frequently saves the farmer from great loss, when their is a failure of his other crops. It grows luxuriantly in the thinnest, coolest, and most sterile soils. It can be used either of one or two year's growth. With attention to its culture, and keeping it from injury from sheep, who are very fond of it, it will produce, when cut every year, from eight to fourteen tons per acre, of good, succulent food. And if cut every second year, it yields at the rate of from twelve to twenty tons per acre. There is no crop which furnishes so abundant food as this, with a very trifling outlay. In many parts of the district very little attention is given to its culture, and it is suffered to grow without any care, and yields a much smaller crop than when judiciously managed. H.

UNDER-DRAINING.

AT the last meeting of the Hartford County (Ct.) Ag. Society, we had the pleasure of listening to an excellent practical lecture on the subject of *draining*, from Prof. JOHN P. NORTON, of Yale College. Having been requested to deliver an address before the Society, Prof. N. decided to confine his remarks chiefly to this subject, instead of discoursing upon agriculture in general terms. The decision was in our opinion a very proper one. Draining is comparatively but little practiced or understood by our farmers; though it is an admitted fact that it constitutes the basis of the great improvements which have been made in British Agriculture within the last half century. During a residence of several years in England and Scotland, Prof. NORTON had the best opportunity for witnessing the benefits of thorough drainage, and of becoming acquainted with the best modes which are practiced in those countries. His knowledge of the subject has, therefore, enabled him to treat it in the most satisfactory manner, and we think we cannot do a better service than to lay his remarks, which he has kindly furnished us, accompanied by some illustrations, before our readers:

The subject which I have selected, as one of much interest to a large portion of the farming community, is that of Draining. During a long residence abroad, my attention has almost daily been called to the drain, as in many situations the basis of all good farming. I have seen and admired the results of its introduction, in almost every part of Great Britain. Since my return to this country, each district which I have visited has also reminded me of the drain, but unfortunately—of its absence, or extremely partial employment.

Drains, in their various forms, are, as is well known, channels for conveying away water;—the first consideration that presents itself then, is—in what situations are these channels necessary? They are obviously so in marshy swampy grounds; these cannot be managed at all without them. But there is a class of wet springy soils, sufficiently firm to walk upon or even to plow, which are frequently, in this country at least, considered dry enough. The grass grown upon them is sour and scanty, and all attempts at vegetation are imperfect; the soil is continually saturated with water, while the air obtains imperfect access; various noxious acid compounds are formed in consequence, and plants live with difficulty. The sun's rays warm such a soil very slowly, and it is only when the best part of the season is past, if at all, that it approaches to a proper state of dryness. When now the drain is introduced, it draws the water gradually away from beneath; the air follows from above, and comes in contact with all the noxious compounds which may have formed; it decomposes them, and they become, in most instances, fit for the nourishment of plants. From the land in its wet state a constant evaporation was going on, which prevented the rays of the sun from exerting their full influence; now there is no such evaporation, and the warm air can penetrate even into the subsoil.

The foregoing cases, are of soils made wet by springs; these, however, form but a small class when compared with those that are injured by retaining too much of the water that falls from above. In stiff clays these injurious effects are very manifest. During the whole early part of the season, they are saturated with water, and consequently cold; any attempt to work them only does mischief, by puddling the whole soil into a species of mortar. When the season is far advanced, the surface dries, and at the same time becomes baked into clods, which are only broken up with very great difficulty and expense. But it may be doubted whether drains would have an effect on such stiff soils, whether the water would run into them. Their action first commences on that portion of the soil which lies next the sides of the drain; this gradually dries, and as it consequently contracts, innumerable little cracks are formed, through which the air obtains access to a fresh portion; this process goes slowly on, until at last the whole mass of clay within the influence of each drain continues perfect, though in some instances, they do not pervade the entire soil until at least a year after the drains are made. Some of the stiffest clays in England and Scotland, are now drained most effectually, and with great ease. The full benefit of draining upon such clays, is not by any means confined to making them dry. Air and moisture acting together, produce various chemical changes in the soil which gradually ameliorate its physical character; rendering it less stiff, and more easily pulverized. I have seen many instances where careful management, and thorough draining, have made wonderful advances toward the entire subjugation of the strongest clays that are ever cultivated.

It is not only on these stiff clays that a surplus of rain water is injurious. There are many soils in which—though dry at the surface, and to the ordinary depth of the plow, water always stands below a certain limit; this results either from the presence of a close retentive subsoil, or from the peculiar formation of the ground. Below this level, wherever it may be, there is no circulation; air cannot penetrate, and the same stagnation ensues of which I have before spoken, accompanied by the same hurtful effects. When the roots of the plant, pushing downward in search of food, come to this level, they stop; the instinct of nature forbids them to proceed in a direction where no proper nourishment is to be obtained; only a few inches of the surface therefore are available for their support, and unless that surface is very rich, the crops cannot attain to any great luxuriance. In time of drouth, when this scanty surface soil becomes dry, the roots are forced to descend lower; but the substances which they unwillingly receive and convey into the circulation of the plant, are destructive to vegetable life, and if the drouth continues long are fatal to the crop.

The summer of 1845, was extremely dry in many parts of Scotland; it was then found that in all ordinary cases, drained land withstands drougth better than that which is undrained, because of the greater depth of soil available for the plant. During the season two neighboring fields of oats, near Inverness, were alike in all things except that the soil of the one remained undrained. The crop upon the drained field, continued fresh and green, though it did not of course yield so well as it would have done in a more favorable season. In the undrained field a large portion of the plants withered and died; this took place particularly in the hollows between the ridges, where they reached the subsoil first. The quality of the grain which did come to maturity was poor, and a subsequent comparison of analyses made upon samples taken from the two fields, showed a decided inferiority in that which was undrained. It is now a proposition regarded among the best English and Scotch farmers as completely established—that drained land is not only better in wet seasons, but in dry seasons also.

There are sections, where it is necessary to introduce drains, even when no excess of water is present. In some parts of England and Scotland, a deposit or band, of iron ochre and other injurious substances, is formed at various depths from the surface. This deposit is sometimes very hard, and of great thickness: it is of course, even when forming a layer of not more than an inch, an impenetrable barrier to the roots of plants. When broken up by the plow, it forms again at a somewhat lower level in a short space of time. The only method which has been found effectual, is to put in drains at the usual distances, as if to free the land from surplus water, and afterward to break up the land with a subsoil or other plow. The rains then filter through the soil into the drain, dissolving the broken fragments, and carrying away gradually the whole deposit. This action is more or less beneficial on all soils. Where a field has been long in cultivation, a hard layer usually forms immediately under the limit to which the plow reaches; this gradually becomes nearly impervious to the roots, but when once effectually broken up after the completion of drains, soon disappears. The depth of workable and profitable soil, is nearly as great as that of the drains themselves, and the farmer by increasing this available depth, increases his capital; for he augments the capacity of his land to bear good crops without exhaustion. The manures which are applied upon the surface, are also much less likely to seek beyond the reach of the roots; even those parts soluble in water are almost all appropriated by the plant, or enter into some chemical combination in the subsoil, in passing through so greatly increased a distance before they escape. When undrained land, on the contrary, becomes saturated by the falling rain, the water still increasing, at last runs away along the surface, carrying manure and valuable soluble portions of the soil into the roads, or upon adjoining fields. The richest part of the land, the surface, is thus robbed of what constitutes a large portion of its value.

Before leaving this part of my subject, I may mention, as proving the efficacy of drains in carrying away soluble deleterious ingredients, an instance which fell under my observation on the estate of Ballochmyle, near Paisley, in Scotland. The proportion of iron present in the soil was so considerable, as to be a serious injury. When drains were introduced, the quantity carried away was very great. In the soil it existed largely in a state called Protoxide of Iron; in this state it is soluble in water, but when it comes in contact with air, it immediately absorbs oxygen, (a species of gas,) and becomes Peroxide, (or common iron rust;) in this state it is no longer soluble in water. When, therefore, the water from the soil charged with Protoxide of Iron, entered the drain, and came in contact with air, the Peroxide was formed, and immediately settled down to the bottom as a red powder; it was so abundant in this case, that the drains soon became obstructed by it, and the proprietor was obliged to make openings at the upper end of each, for the purpose of introducing a powerful stream of water: this washed out the Peroxide of Iron in large clots. It was necessary to repeat such an operation occasionally, as fresh quantities soon accumulated.

This is not the place to enter into many chemical details respecting the action of air and water upon the soil; the combinations which are broken up and entered into, would be too complicated, even in the present imperfect state of our knowledge respecting them, and too purely scientific for a mixed audience. I will therefore at once proceed to give some information as to the manner in which drains should be made, of what materials, and how far apart they should be placed.

In many parts of New England, stones are so abundant, that even the resource of walls, almost unexampled in magnitude, proves insufficient for their entire disposal. In such cases it may be advisable to employ stones for drains, even where other materials can be obtained at cheaper rates. Stone drains, when properly constructed, are as durable as any others. Smith, of Deanston, the great originator of the present system of thorough draining, says that the stones should be small, none much above the size of a hen's egg. The bottom of the drain should be about six inches across; and from six to eight inches in depth of these small stones, should be thrown in. Turfs cut thin and very carefully, so as exactly to fit, should be laid on the top, overlapping each other, and the earth *rammed down hard*, as the object is to prevent entirely the access of water from above; it should all filter in at the sides, for if it finds an entrance at the top, sand and small stones will wash down, and eventually choke the drain. On most farms in this section, a sufficient number of small stones may be found on the surface of the fields. If large stones are employed, the sides are much more liable to breaking, and such drains also become the resort of rats and mice, whose holes greatly increase the danger of obstruction. The water from a well made stone drain, should run nearly or quite clear even after heavy rains.

Mr. Smith stated, that he has them which have been in operation for twenty years, and have required, during that time, no repairs whatever. Where no small stones are to be found, it is necessary to break larger pieces with the hammer, as is practiced in the making of macadamized roads; an operation which adds greatly to the expense.

To meet this difficulty, the expedient has been devised of making clay pipes. These carry off the water effectually, and at the same time lessen the cost of the drain. The tiles first used were made in a horse-shoe form, each piece being about fourteen inches in length, and having a flat sole of corresponding dimensions to place under it, and prevent sinking in the soil, or undermining by currents of water. These were much more cheaply transported than stones, one load going as far as 5 or 6, and the cost of digging was also considerably reduced; for the tile, being only about 4 inches wide, occupies a bed much narrower than the stone. The several pieces of tile were joined together in the bottom of the trench, and formed a connected channel for water. The earth was compactly filled in, and the water found its way through the joinings of the pieces. These tiles were very effective, and have been employed to an immense extent in all the better cultivated parts of Great Britain and Ireland. Whole counties are now underlaid by them, and some of the most enormous incomes have been doubled by this simple improvement. At present, however, another form of tile is coming into general favor. It is a simple round pipe, made in lengths like the first, and for the cross drains of not more than an inch and a half in the diameter of the bore. These can be made much cheaper than the other kind, as they are smaller, and all in one piece. They are not more than half the weight of the old fashioned tile and sole, and therefore an additional saving is affected on the transportation. The trench for their reception is also much smaller, being at the top just wide enough to allow the trencher to work, and cut at the bottom with a narrow tool, to exactly the proper size for the reception of the pipe. The pieces are simply laid end to end, and wedged with small stones when necessary. The water finds its way in at the joints. Many have expressed doubts as to the operation of these drains, thinking that water would scarcely penetrate into so small a channel, through such minute apertures. No difficulty has been experienced in any case. One gentleman, residing in the south of England, who has employed these small pipe tiles in draining exceedingly stiff clays, laying them at the depth of three feet, and ramming the clay hard down, offered a premium of £100 to any person who would keep the water out of them. These tiles, of both varieties, are made by machinery. The clay is worked in an ordinary pug mill, such as used in brick-making, care being taken that no stones are present; it is then forced through a die of a circular or horse-shoe shape, according to the kind of tile intended to be made. It passes through in a continuous stream, which is cut off into the proper lengths by hand, or by a little apparatus connected with the machine. After drying sufficiently, they are burned in a kiln. By the use of machines, and by manufacturing on a large scale, the price of tiles has been brought very low. In some parts of England, the small round pipes now cost only ten shillings, or $2.50 per thousand, each tile being fourteen inches in length. This would make them only about four cents per rod. There is no doubt that should the demand be great, they may soon be obtained here at as low rates. I hope to receive in the course of a few weeks such information from one of my Scotch friends, as will enable me either to give directions for the making of the best tile machine, in this country, or for the importation of a small one from England as a model. If the farmers only call for them in great quantity, I have full confidence that our American mechanics will soon improve upon the best English model that can be obtained. Even at $5.00 per thousand, or eight cents per rod, the employment of tiles would be cheaper than that of stones in most situations, unless they had to be transported many miles. It is moreover, much easier for inexperienced persons to cover them properly. In the Repository of Arts in this city, are to be seen several of the horse-shoe shaped tiles; they are made, I understand, at Enfield, but there seems to be no soles accompanying them, and I do not know their cost. It may not be inappropriate to mention in this connection, the importance of such an institution as this Repository; it is now in its infancy, but if patronised as it ought to be, will become a place where models or specimens of such useful articles may be found,—a place of reference for all professions.

We now come to the important question—How deep should the drains be made, and how far apart? Smith, of Deanston, and many distinguished British farmers agree in the opinion, that the proper distance of separation is from sixteen to thirty-six feet. That first named is proper on stiff clay soils, and the latter only on those which are very light and sandy. From eighteen to twenty-four feet, is, I should think, the more common distance. Upon the subject of depth, great diversity of opinion has been expressed; but I believe that all of the best farmers are now united in the conviction, that shallow draining is in the end bad economy. One of the principal benefits derived from the introduction of the drain, is the deepening of the soil, as I have before explained. But this benefit is never fully, and in many cases not at all felt, until the drain is followed by the subsoil plow. The layer of earth immediately over the drain, should never be disturbed; if the plow breaks it up, particles filter in, and soon impede the exit of water. It is clear, therefore, that the tiles or stones should be laid so deep that the point of the plow cannot approach within four or five inches of their upper surface. The improved implements now in use for subsoiling, go down in some instances as far as twenty inches. Our farmers may never have gone more than ten, but they ought not, by putting in shallow drains, to preclude themselves from the ability to adopt improvements in this direction. Another argument against such drains, is the fact that they do not draw as well as the deeper ones, nor dry so wide a surface. I have known repeated instances where farmers who had made them shallow, were so disappointed in their efficiency as compared with deep ones, that they went to the great expense of taking them up, and relaying them some inches deeper. From twenty-six to thirty-six inches, is the depth ordinarily employed at present, although some maintain that four feet or four and a half is still better; this, however, seems carrying the matter to excess; and there can be no doubt that at distances of from sixteen to twenty-four feet, drains at a depth of from twenty-six to thirty-six inches, will dry the stiffest and wettest land.

Several plows have been contrived for the purpose of cutting the drain trench at one operation. These are drawn by from eight to twelve horses, and following an ordinary plow take out the earth to the depth of from eighteen to twenty inches. A few inches more are then removed by the spade. This plow is said in some parts of Scotland to have greatly reduced the cost of trenching, but has never been generally introduced. I should think it too unwieldy and expensive an implement for this country.

It may be useful to introduce here cuts (figs. 5 and 6) of the various spades and other tools used in cutting the tile and stone drains, and sections of the drains themselves:

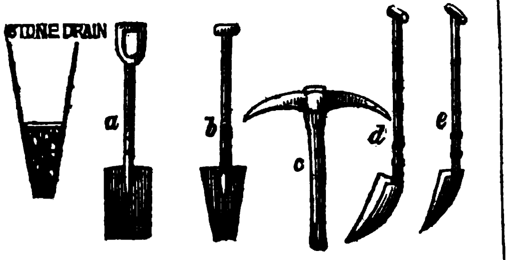


Fig. 5—*Draining.*

Explanation.—*a.* First Spade, common shape.—*b.* Second Spade, which follows the first, and is narrower.—*c.* Pick, used when the subsoil is stony.—*d.* Large Scoop-Shovel, for removing the loose earth after picking.—*e.* Smaller Scoop-Shovel, for the bottom.

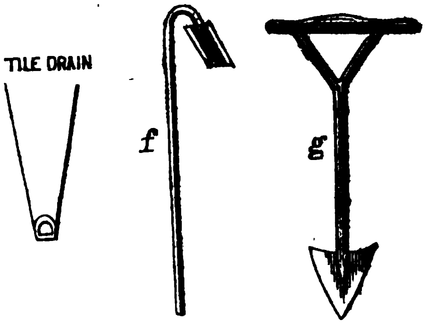


Fig. 6—*Draining.*

Explanation.—*f.* A flat Scoop, with turned-up edge, for cleaning out the bottom.—*g.* A Flauchter Spade, used for cutting turf to cover the small stones in the Frequent Drain.

The old theory as to the location of drains was, that they should run *across* the slopes, so as to cut off the springs and catch the descending water. This method is now, however, entirely abandoned in all the best districts of England and Scotland; the drains are run *straight down* the slope, exactly parallel to each other, and without reference to wet or dry spots, excepting sometimes a short branch to a strong spring. The layers of earth in the subsoil generally lie in such a direction that the water flows from them at a more uniform depth, into the straight than into the cross drains. The accompanying cut (fig. 7,) shows how the layers run into the cross drains at unequal depths. A drain straight down would cut them all to the same level.

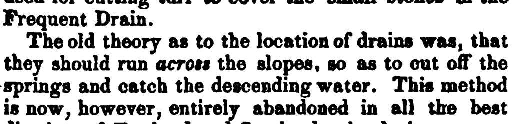


Fig. 7—*Draining.*

In those directed straight down the slope, the current is also greater, and usually suffices to wash away any small obstructions; should they become quite stopped, however, the great pressure will cause them to burst out, and show where the mischief really is. In cross drains the descent is slight, and they may remain choked for a long time before the cause of evil is discovered.

Where the declivity is very gentle, the drains made of small stones do not work well; it is in such cases necessary to employ tiles. Mr. Smith says, "that with careful management a drain will act efficiently when the fall is only four inches per mile." At the foot of each declivity, or half way down if it is a long one, a main drain made of large tiles, or built of stone with a smooth floor, should run across to carry away the water from the small drains; these should not be of a great length without thus discharging, as the friction against the sides of so small a tube, unless the descent is considerable, seriously retards the flow of water. Such main drains should be sunk three or four inches below the small ones. Tiles of a large size are made expressly for them.

Having thus explained the structure, and the theoretical advantages of the drain, it is necessary to say something more definite as to its practical benefits. The farmer who cultivates his land for a subsistence, must always fall back on this inquiry—will this improvement repay me? Profit must be a test of success with him. The verdict of this class in England, Ireland, and Scotland, is most decided. During the last year of my stay in those countries, I visited districts where the utmost efforts of the tile works could not supply the demand. The farms are almost all in the hands of tenants, but the landlords generally bear a part of the expense of draining: in some cases they furnish the tiles, if the tenant will do the cutting and filling of the trenches; in others they allow a certain per centage of the amount expended. The landlord feels that the permanent improvement of his land by this simple process is so great, that he is willing frequently to bear much more than half of the charges. In Scotland, where long leases are prevalent, tenants do not hesitate to drain entirely at their own expense, especially towards the commencement of a lease. Many of them state that the increased produce repays the whole cost of the improvement, in from two to three years. Five or six years was the longest period that I heard stated, and that only in peculiar cases. The actual outlay in the operation, of course varies greatly on different soils, and with the distance of the drains from each other, but it may be stated generally at from £3 to £8 per acre, or from $10 to $40. This gives little information as to the probable cost in this country, as our rates of labor and modes of working are entirely diverse from theirs. The extent to which some large tenants and proprietors have carried their operations, is far beyond anything that single farmers here can do.

In 1846, I visited the farm of Mr. Dudgeon, of Spylaw, at Kelso, near the English border. The surface soil was stiff, and the subsoil almost impervious to water. He had then drained about 900 acres, and the length of drains was nearly 300 miles. His landlords defrayed about half of the expense. He had a tile work which turned out from 4 to 5,000,000 tiles in a year, but not sufficient to supply his wants. He was then in the beginning of a new nineteen year lease, and was draining as fast as possible, in order to reap the utmost advantage. The drains immediately raised the value of his land from a rent of $2.50 per acre, to one of $6.50. Owing to their ameliorating and drying influence, he had fine crops of turneps on stiff clays where it had never before been thought possible to grow them. The system of draining across the slopes had been tried on this farm, but abandoned as ineffetual in comparison with Smith of Deanston's method. He was even going over those fields anew; at the time of my visit workmen were cutting straight down one of the slopes, across the old drains. Mr. Le Roy, a proprietor in the same neighborhood, had put in about 250 miles of drains on his own estate, thereby increasing the rent of many of his farms from $5 to $14 per acre. These were men of large property, but instances of equal or even greater success on a small scale, are frequent in many districts. In travelling over an unusually large portion of Great Britain, and hearing the experience of a very great number of practical men, I never met one who was disappointed in the result of efficient, thorough draining.

The manner of carrying out improvements, and the extent to which they are at once adopted, must necessarily be very different in this country and England. Our farmers are mostly proprietors of moderate means, each managing his own land. We have no tenants who are willing to pay eight or ten thousand dollars of annual rent, when that sum would purchase a superb estate in the west. Our farming being on so much smaller a scale, the improvements must be more gradually perfected. They may, however, and in this instance ought to be, of a similar character. The remedy for wet cold land is the same here as there, and there are few of our farmers who could not in the course of each year, find time to accomplish something; even without increasing, to any material extent, their usual force. Half an acre or an acre of drains might surely be put in annually on almost any farm, and I have little doubt that he who commenced by one acre a year, would not long be contented without doing more. It is of much importance, that what is done be done *well*. The desire to go over a large surface, should not induce the improver to go over it in an imperfect manner. I have known instances where the drains were put in at double the proper distance, with the intention of finishing from the profit of the first operation. The sequel of such unwise economy is almost always the same. None of the ground is thoroughly drained; the land is still in a state unfit for the most advantageous cultivation; the profit that ought to be derived from draining, is only in a comparatively small degree realised, and the money invested is returning but a poor interest on the outlay. The prospect of a little saving, ought not to be an inducement to neglect the best mode of construction. Due care in the laying and filling, make a difference of many years in the time of duration. In the covering of stone drains particularly, no pains should be spared.

The subject of draining is peculiarly important in this section, where there is so much wet heavy clay land. A large extent of it lies nearly in a state of nature, so far as regards the adoption of effective improvement. On many wet fields in the hollows, there is scarcely any sustenance for cattle, and a large proportion of the hill sides produce only a scanty innutritious growth of grass. Even much of the land that is mowed, produces but a small part of what it would bear, were it not so wet. The land which thus lies entirely idle, or comparatively unproductive, is in many cases of the very best character, strong and deep; the hollows and flats generally are richest, because they receive the washings from the hills.

Improvements upon such soils pay the improver better than any other, because the gain in value is so great. Land which is tolerably dry, produces an increased crop after draining, it is true; but in that which was nearly worthless on account of a surplus of water, the whole crop is a gain. What would pay a better rate of interest than a ton and a half of hay per acre, from land before of little value, even as pasture? I have known instances in Scotland, where in cases of this character, the first crop repaid the whole expense of improvement. Suitable materials for the manufacture of tiles, can be procured in this section with great facility, and if there should be a good demand, they would in a short time be afforded at low rates.

But time admonishes me that I should draw toward a close; the subject is not by any means exhausted, but I think that enough has been said to show the propriety of combining theoretical with practical knowledge. Draining, as now described, becomes a science; giving full scope for investigation, and long courses of elaborate experiments, and I trust that all are convinced, that the results of such experiments may be communicated in a form quite intelligible, even to those who have not turned their attention to scientific subjects. It has been my object to show, that what is ordinarily termed book farming, may yet be practical; and that it may offer results worthy the attention of those who depend for a livelihood on the profits of their profession. Among the best farmers abroad, I heard but one voice as to improvements; it was always the remark that those who farmed *highly*, made most money. That is—those who reasoned most upon their pursuit—who studied the causes of good or bad crops—who availed themselves of every source of information, and who expended the most money judiciously upon their lands, always obtained the largest profits. A stress should be laid upon the words *judicious expenditure*, because we see some in all communities, who enter into improvements rashly, and without due precautions. The failure of such ill-advised attempts, exposes a good cause to ridicule. I would not, however, be by any means understood to say, that all farmers should become scientific men; that is clearly impossible; but they may through lectures, or through books, acquaint themselves with the great principles upon which the cultivation of the soil should be grounded; may obtain an idea of the nature of the substances with which they have daily to do. Such knowledge as this is simple, and can be attained even by an intelligent child, of twelve or fourteen years.

Diseases of Animals.

Founder in Horses.—A writer in the S. W. Farmer says that he rode a hired horse 99 miles in two days, returning him at night the second day. In the meantime he had been deeply foundered, but so effectually cured that the owner would have known nothing of it, if he had not been told. In other cases he was nearly as successful. This is his method of cure:—Bleed him immediately in the neck, according to the severity of the founder—in extreme cases, as long as he can stand. Then draw his head up, and with a spoon put back on his tongue salt enough till he has swallowed a pint. Let him drink moderately. Then anoint the edges of his hoofs with turpentine, and he will be well in an hour. The salt operates as a cathartic, and with the bleeding, arrests the fever.

Puerperal Fever in a Cow.—It is stated that some apparently hopeless cases of this disease have been cured by a compound of ether with cathartics. In one case, where there was every appearance of speedy death, by repeatedly administering these medicines, the cow in thirty-six hours got up and began feeding, and was quite well in a week.

Disease in a Cow's Udder.—In the month of May, 1846, I had a beautiful young cow, that gave over twenty quarts of milk per day, injured in one of her teats to such an extent, that the milk could not be drawn, and in consequence suppuration of the bag ensued, and I lost the use of her. Some two weeks after the injury, I lanced the spot where the first indication of suppuration appeared, and I repeated the opening four or five times afterwards, at different periods and in different places, with good results; but the bag continued to yield pus for ten months. Now I wish to learn whether, if I had opened the teat through the milk-passage, at the proper time, the teat might not have healed, and the cow been saved from the butcher? Would not a compress, secured by a tarred cloth, prevent the spontaneous flow of milk in such a case as is alluded to in your answer to the inquiry of J. L. R., in the last volume of the Cultivator, page 287?

Autograph.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY JOHN J. THOMAS.

The Pear Blight.

THE past season has been unusually destructive to the pear tree. In some gardens, scarcely a tree has wholly escaped; and in many instances entire trees have been destroyed. The frequency and extent of this disaster is likely to prove a serious drawback on the general cultivation of this delicious fruit, which otherwise would rank, perhaps, second to none in importance.

Doubts of the correctness of received theories of the blight, seem to be rather increased than diminished with this increased prevalence. Every additional fact must be of importance, as every new aspect of the disease, whether for or against established theories, will enable us the better to look for a remedy.

The *Blight* in the pear, is another name for *death*. When a branch suddenly dies, from whatever cause, its leaves turn black. If the limb be girdled, or lopped by breaking, or destroyed by insects, or poisoned by disease, the same external appearance is presented. But the infusion of poison may blacken the leaves more suddenly than mere mechanical causes.

Two theories, it is well known, have been extensively adopted, viz: those of the *insect-blight*, and the *frost-blight*.

1. The first, which has been known for many years, and more especially adopted in New England, ascribes the mischief to an insect which, though very minute, or scarcely the tenth of an inch long, girdles a considerable portion of the interior of the branch, and thus cutting off, in part, the supply of the sap, when most wanted at a rapidly growing season, produces local death. Actual observation has proved that this insect is, in some cases, a cause of death in the branches of the pear. It must be so, however, to a very limited extent, as no traces of its work are seen by the closest microscopical examinations of affected branches, in most parts of the country. It also usually happens that a very large part, or nearly all of a branch, must be cut across to produce death, as any one may prove by the use of a knife; hence it may be reasonably doubted if so minute an insect could always operate to a sufficient extent to produce the disaster, unless it infuses poison, of which there appears to be no evidence of a positive character.

2. The most usual form of the disease is what has been of late years known under the name of *frost-blight*, or *frozen-sap blight*. This has been accounted for on the supposition that the severe frost of late autumn or winter, so affects the sap of unmatured branches as to destroy its healthy character, or to induce a change similar to that of fermentation, and thus to poison, instead of nourishing, the growing branches. This is supported by the following facts:—

1. Blight most usually attacks trees of late-growing or unmatured wood, or of such varieties as are not of compact growth. Hence trees on very rich or moist soils, which continue to grow luxuriantly till cold weather approaches; or such as have been checked at mid-summer, or pruned late, so as to produce a late second growth; or such as are remarkable for porous or spongy wood; are eminently liable to its attacks. The Madeleine and Bartlett have unusually spongy branches, and have long been known as extensive sufferers; while on the other hand, the Seckel and Summer Bonchrietien, (though the latter is a rapid grower, it is of very close, compact growth,) have rarely been known to be attacked. Whether the frost operates on the sap only, or on the unripened wood, or on both, is not a matter of so much consequence as the fact, extensively proved, that good healthy trees, on a dry soil, of moderate fertility, well cultivated, so as to produce a fair growth early enough to ripen thoroughly, are generally much safer from blight, than those under the unfavorable circumstances just mentioned.

2. Blight has usually been found to prevail most extensively after severe winters, preceded by warm, moist autumns; and has also in some cases been noticed to be very general within a few days after very severe night frosts at the commencement of summer, when the new, tender and succulent shoots are easily affected. The latter result was particularly noticed in 1844. It has also been since observed to follow immediately severe frosts at the same season of the year, which were not noticed by any but early risers; and in one case, a frost was accidentally noticed near midnight, but was dissipated before morning by a warmer wind. Several cases of blight were soon after observed. This last form of blight, which perhaps is direct and immediate death from the freezing of the young shoots, must be somewhat different from the true frozen-sap blight, which often is not conspicuously manifested till several months after the first injury. It may often happen, however, that the diseased and fermented sap, from a frost-killed and succulent shoot, may run down the larger branches, and rapidly spread the evil of its poisonous influence. As a consequence, though numerous cases may suddenly follow the frost, the disease may prevail more or less from the same cause, for several weeks afterwards. This result has been observed in two very distinct instances within a few years.

There appear to be some cases of death in the branches of the pear not satisfactorily accounted for by the above theories. P. Barry, in the *Gen. Farmer*, states that on his own grounds the blight has been uncommonly destructive the past season, attacking many healthy trees on hard dry land, with well ripened wood, including the Seckel, which has been thought by many to be proof against the disease. It is true, the land where they stood had been highly enriched by manure but this did not cause a late unripened growth the previous autumn. But the following fact is worthy of notice: "In close proximity to these trees, stood thousands of young nursery trees, not one of which was affected." Why should large trees, which ripen their wood so much better than young and rapidly growing ones, be alone affected? The only tree on the grounds of the writer, at all injured the present year, was one of rather slow growth, standing on drier and firmer soil than most of the rest, which escaped. Not the slightest mark of an insect could be discovered.

In connexion with this subject, it may be stated that apple trees, as well as quince and hickory, have been extensively affected. But with the apple, the disease does not appear to extend down the branches as with the pear, but to be confined to their extremities. We cannot discover, after much observation, that one sort of apple tree is more affected than another, although mostly confined to *old* trees; nor that warm frosty valleys, where vegetation is most rapid, and cold most severe, on clear nights, favor the disease more than other localities.

During the present year, the greatest number of cases were noticed to have occurred after a number of days of very hot, dry weather, towards the latter part of summer, when the trees had passed the season of their greatest rapidity of growth. Even the Osage Orange, supposed to be secure from insects, was affected late in the season.

Whether in the preceding cases, the mischief had been commenced the previous winter, and was slowly advancing in progress, until it was suddenly developed, in the midst of summer; whether old or feeble trees are in some cases more liable than young and thrifty ones to the combined influence of cold, and the heat of summer; or whether this disaster is not the result of sudden atmospheric changes merely; or is caused by an influence as unknown an inexplicable as the potato malady, is at present, at least in some degree, involved in conjecture. That insects have produced it, and that frost often occasions it, cannot be doubted; but there may, nevertheless, be other influences quite as potent and extensive; and where all are more or less operating at once, satisfactory conclusions must necessarily be very difficult.

It has been suggested lately, that the disaster is produced by " a minute, venomous insect, the sting of which is poisonous to the juices of the pear." But as neither the insect nor the perforation of its sting, have ever been distinctly discovered, and as it is not known that insects attack vegetable growth merely for the purpose of stinging and poisoning, and without some specific object, as for food or depositing eggs, either of which would be soon discovered—we think this theory must for the present be regarded as too conjectural to be adopted.

Whatever may be the cause of this truly formidable evil, the best remedy, alike applicable to all cases, is instant excision of the affected parts. If an insect is within, burning the branches is essential. In the frost blight, cutting off some distance below the affected parts will, in most instances, prevent the poison from flowing downwards. It is true it often happens, where a tree is slightly affected, it recovers without any care; while again, when badly diseased, the whole tree may be cut away before the evil ends; but in by far the majority of instances, the remedy will be highly useful, and save the tree. It however often fails for want of constant and daily watching, and unremitting application.

The best modes of *prevention* will doubtless be more fully known when the causes are better understood; but the precautions noticed in a former part of this article, to produce a good, healthy, well ripened growth, will, in many cases, be advantageous.

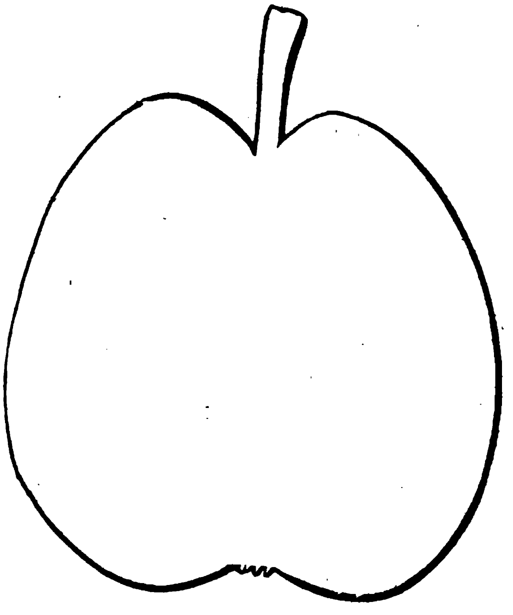
The *selection of varieties* least liable to disease, may also be a useful aid in prevention. From its uncertain nature, and its different effects in various localities, it is hard to point out those the least liable; but from a very limited opportunity for observation, it is believed that the *Seckel*, *Washington*, *Summer Francreal*, *Skinless*, and perhaps the *White* and *Gray Doyenné*, are very rarely affected; while the Madeleine, Bartlett, Genesee, St. Ghislain, Passe Colmar, Dearborn's Seedling, and many others, are frequent sufferers.

Pears and Cherries.

A deep interest is beginning to be felt in regard to the culture of fruit in the vicinity of Oswego, and I know of no business that pays the farmer better. In passing through several counties in this State, I have noticed that the choice kinds are very much neglected, especially the best kinds of the pear. Not one farmer in fifty has a tree, and where there are trees, they are generally of such fruit as is not worth cultivating. On conversing with intelligent farmers on the subject, and asking why they have no pear trees, the answer was that it takes them so long to come into bearing that it was hardly an object to set them out. This is the stumbling-block which should be removed out of the way. I acknowledge there are sorts which require ten to fifteen years to come into bearing, but there are other sorts that bear very young. I have a tree of the Bartlett variety, the trunk of which is only an inch and a half in diameter, that has borne three years, and was so heavily loaded in August, 1847, that it took four stakes to prevent the limbs from breaking. When people see these things they become convinced, and men from fifty to sixty years of age are willing to buy pear trees, and may reasonably expect to eat fruit from them.

As to the blight in pear trees, I have never lost but one tree by it, and that stood in wet ground. I have about four thousand trees from one foot to twenty feet in height, and not a twig nor a leaf has ever been blighted, not even on those that have made eight feet growth in a season. My soil is a rich loam, and my trees are very healthy. I give the soil a top-dressing of manure every year, and plant it with some hoed crop.

Cherries are as much neglected as pears; but I hope to see farmers soon set about raising the finest sorts, for there are now but few, comparatively, but the common red, which, when compared with the best kinds, is almost worthless. In my opinion an acre of land set to fine fruit would yield a greater profit than ten acres of grain. Fine cherries and fine pears will always find a ready sale and good price in our markets. SCHUYLER WORDEN. *Oswego.*



Oswego Beurre Pear.

This is a new pear, raised from seed by Mr. WALTER REED, of Oswego, N. Y., and brought into notice chiefly by Mr. J. W. P. ALLEN, of that place, who has left us some specimens of the variety, which we think fully deserving the high praise which has been bestowed upon it. It is a hardy and thrifty sort, and the tree bears early and abundant. Mr. DOWNING has described it in the *Horticulturist*, as combining "in a great degree the finer qualities of the White Doyenné and the Brown Beurre." Mr. D.'s description of its form and qualities, is as follows:—

"Fruit of medium size, form oval-obovate, regular. Skin smooth, yellowish-green, streaked and mottled with thin russet. Stalk short and stout, set in a bold and rather deep cavity. Calyx much like that of the White Doyenné, small, closed, set in a smooth, regular basin, which is only moderately depressed. The flesh is in consistency and taste between that of the White Doyenné and Brown Beurré, buttery, melting, juicy, with a brisk, rich, slightly sub-acid and excellent flavor. Core small. Seeds few."

Its season of ripening may be said to be November and first of December; but Mr. ALLEN thinks by attention to early and late picking and proper ripening, "it may be eaten in perfection from the middle of October to middle of January."

Fruit in Georgia and Mississippi.

M. W. Philips, of Mississippi, states in the *Southern Cultivator*, that he was formerly ridiculed for proposing the market culture of fruit; but in four years from that date, one man sold over $2,000 worth of fruit from a few acres—that he has himself sold peaches at 75 cents per dozen, and $11 worth from a tree four years of age. He says he can take ripe to market, by the first of July, peaches of the Early York, George IV, and Red Rareripe; and so on successively, by different varieties, to the middle of October.

Greene B. Haywood, of Casulon, Georgia, in the same paper, says that fine *pears* have been produced at Athens, in that State. The apples found best adapted to that climate, have mostly originated in that State; among the good winter apples, proved there, he describes the *Village Burr*, *Virginia Green*, (keeping till summer,) *Cheese Apple*, *Iron Black Apple*, and *Oconee Greening*. A variety called *June Apple*, ripening in July, contrary to the general characteristic, does not ripen earlier by being moved south. The trees must be allowed to branch low, as the hot sun has already injured such of his young trees on the trunk, as were trimmed high.

Another correspondent in central Georgia, says that the *pear*, but for the blight (which pervades the whole United States) flourishes better than the apple; that the quince thrives finely wherever planted; that plums, nectarines, and figs do well; but cherries, except the Morello, have not succeeded well. Northern winter apples ripen and drop during the latter part of summer, and do not succeed so well as native fruits.

CULTURE OF STRAWBERRIES.

I discover in the magazine of Mr. Hovey, for November, a laudatory notice of his Boston Pine, by Mr. Coit of Norwich, in which it is praised for its strong character as a bearer. In the backwoods, we should deem this a strange recommendation for a staminate, which we only use as an impregnator, and would prefer a plant making no runners, as one so vigorous would soon root all the pistillate plants out. From 1500 to 2000 plants, he raised near a bushel of fruit; a strong evidence of its being staminate, and as we find it not producing perfect fruit on one-tenth of the blossoms in an average of years.

From the same number of pistillates, properly impregnated and cultivated, we often raise from five to eight bushels. My neighbor Culbertson must do this, or he would not take 120 bushels to market in a day. It is strange that staminates should still have their advocates, as valuable for cultivation for their fruit. In some years some staminates bear five times as much as in others, where no increase is found in the pistillates, as every blossom will bear a perfect fruit if impregnated, and not killed by a late frost, or the plants too much crowded to admit of impregnation, which is often the case. Writers should not undertake to speak of the bearing of a plant from the crop of a single year. Why is it that your nurserymen still advertise large fruited, perfect blossomed staminates, that bear a full crop of perfect fruit? Our nurserymen never do this, but to all pistillates add eight or ten staminates to the hundred, and in separate parcels. A HORTICULTURIST. *Newport, Ky., Nov. 24th*, 1847.

RAISING QUINCES.

A correspondent of the *Horticulturist*, who raises this fruit of extraordinary excellence, pursues the following course:—He selects good, deep, dry, rich soil; which is deepened by a thorough use of the subsoil plow, and manure applied copiously and deeply, by dropping it in the bottom of each furrow as the plowing proceeds. Large and deep holes are dug for the trees; each receives half a barrel of good compost; the branches are shortened one half, before setting; and the soil well settled among the roots by drenching with water, before the hole is quite filled. All fruit trees, by the way, should receive this good treatment. He does not lose one tree in a hundred, by this excellent practice.

The pruning is given in autumn, and consists of cutting out, as sparingly as possible, and only old, crooked, crowded, and decayed branches. Every autumn, manure is spread round each tree, and after a light plowing in spring, salt is spread broadcast at the rate of ten bushels per acre. The salt is regarded of very great consequence, but it must be applied in connexion with free manuring every year. The groundis kept mellow and clean by constant cultivation, potatoes, sugar beets, &c., being found well adapted to the purpose. The principal secret of success, it will thus be perceived, consists in cultivating and doing everything in the best manner; while others, who do not succeed, do not cultivate their trees at all.

The writer states that a good crop of quinces may be obtained three years after transplanting, and the trees will continue in a productive state thirty years.

Varieties of Fruit, and Soils of their Origin.

There are some varieties of fruit which appear to be equally good in all places, and in all kinds of soil. Others, in some localities are fine, and in others nearly worthless. It becomes an interesting subject of inquiry in such cases—What was the soil where such varieties originated, and are not similar soils best adapted to their perfection? Very little attention appears to have been given to this subject, and we are in possession of but few facts in proof.

We have noticed the present year that the Imperial Gage, which appears to have originated on the sandy soil of Long Island, has in all cases been fine when grown on sand or sandy loam; but on heavy clays it has been nearly worthless.* The same result has been observed in relation to the Bloodgood pear, which appears to have had a similar origin. On sandy loam it was excellent; on clay it was far inferior to the Skinless. The latter pear is invariably fine on heavy soils, but not always so on those of a lighter character—what was its origin? The White Imperial peach, which first grew on the clayey soils near Aurora, in Cayuga county, N. Y., proves to be on such soils of the highest quality; but, though always fine, it appears not always to sustain the full perfection of its character on sandy loam.

The subject appears to be worthy of further inquiry, and if the supposition is correct, lists of varieties, adapted to soils of different qualities, would be valuable to those planting orchards and gardens.

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* A friend informs us that the finest flavored Imperial Gage plums he ever tasted, grew at Troy, the soil sandy loam.

HINTS FOR THE SEASON.

Shelter for Stock.—In providing for domestic animals in winter, the first requisite is *shelter*. It is remarkable that under all climates the temperature of the animal system when in perfect health, is nearly the same—about 100 degrees. This temperature or vital heat, is supported by the decomposition of carbon, which is supplied to the system in the form of food. The greater the exposure to cold, the more rapid is the dissipation of heat from the surface of the body, and the greater must be the internal supply of fuel to keep up the proper temperature. If the amount of food is deficient, the deficiency is made up by a decomposition of the bodily tissues—the fat, flesh, &c.—and the animal grows poor. If the insufficiency of food and the exposure continue, the body becomes more and more emaciated from the loss of its carbon, till at last it is incapable of supplying the quantity needed to support the temperature, and death ensues. By protection from cold, the consumption of carbon is lessened, and hence "warmth is equivalent to food."

But there are other advantages of shelter. Long exposure to wet, though the degree of cold may not be great, is injurious to the health of animals. The continued saturation of the skin with water, prevents the natural exhalations, and tends to induce disease. The fleeces of sheep are known to be much deteriorated from this cause. But if it did not injure the health of the animals, its effects would be prejudicial to the interest of the farmer in another way. It prevents the animals from enjoying that quietude which is necessary to thrift. The connexion between the nervous and muscular system, is such that whatever disturbs the former, sensibly affects the latter; so that the animal may actually grow poor from no other cause than simply being rendered *uncomfortable*. For these reasons shelter—at least protection from storms—is as useful where the cold is not so intense as to freeze the ground to a great degree, as it is in a more northern climate. The dampness and mud in the one case, are as injurious as the greater cold but drier atmosphere of the other.

Feeding Stock.—A man who was noted for the excellence of his working-oxen, once observed to the writer, that he could seldom hire a man who was "fit to drive a yoke of good oxen to water." We think it is quite as difficult to find a man who is capable of *feeding* cattle or other stock in a proper manner. There is generally a great deal of unnecessary waste. Some men will carry stock through the winter with half the quantity of hay or fodder that others will use, and yet the stock which has consumed least will come out in the best order. To feed economically, the animal should have just the quantity he requires, and no more—none should be given to be trampled under foot and left, unless it is intended for manure, without being first eaten. It is best, generally, to feed under cover, in clean mangers; though in dry weather coarse fodder, or that of inferior quality, may be fed in mangers in the barn-yard, or on dry hard ground, or clean, hard snow. Coarse hay, clover and timothy, (herds-grass,) and corn-stalks had better be passed through a cutting machine, and if some bran, shorts, or a little meal can be added, the improved quality of the whole will render it much better relished by the animals, and they will, in their increased flesh or milk, repay the cost.

A good food for work-horses or oxen is cut hay, with from three to six quats of corn-meal per day—regulating the quantity according to the degree of labor to be performed. Oats and corn ground together make a good provender. Moisten the hay, and mix the meal with it it. If the labor is not severe, two quarts of meal with the hay, and the addition of a peck of carrots per day, will keep the horse in good condition. The carrots are good for the blood, and will improve the horse's health. Carrots are also valuable for milch cows—increasing the quantity and improving the quality of the milk.

Rowen hay, or after-math, is most suitable for calves and milch cows, or sheep. It is almost like grass, and will produce nearly as much milk. It is likewise good for fattening animals; but for working-oxen and horses it produces rather too loose a state of the bowels to admit of the muscular exertion which is required.

Young cattle and sheep will be benefitted by a daily allowance of some kind of roots—potatoes, carrots or turneps. The succulence of the vegetables will render their dry food more like grass—the most natural and proper food for such stock. January and February are the best months for disposing of the poorest fodder. While the weather is coldest, the appetite is sharpest, and articles will be eaten which under other circumstances would be rejected.

"Breaking Roads" in Snow, is a business which the farmers of the northern section of the country are frequently obliged to perform. Were it not that this work is generally performed as a frolic, in which the whole neighborhood engage, it would be regarded as very laborious and a great burden. Formerly it was the practice to shovel a track through the deep drifts, and the travelled road was sometimes several feet lower than the snow on each side. But the objection to this was that the first snow storm or high wind filled up the road and rendered it impassable till it was again dug out. The best course is found to be to avoid digging down as much as possible. Some narrow and deep drifts must be dug through to keep the road level, but the principal track is made by *pressing down* the snow. A couple of heavy timbers—round logs are best—are fastened together and held by a cross-bar so as to represent the form of an A. They should be twelve to fifteen feet long each, and be spread at one end to the width of ten feet. A plank may be fastened, edgewise, along the top of each log, which will prevent the snow from falling over and filling the track as the timbers are dragged along. The concentrated strength of all the oxen and steers that can be brought together is to be applied to these timbers, which are to be drawn over the snow to form a road. Oxen are better than horses for this purpose, and will work through deep snow where horses would stick fast. Rather light cattle, if handy, should be put forward, and the snow should not be shovelled except in narrow drifts, as before mentioned. Twice passing with the timbers will make a smooth, hard road. It is customary, in passing the second time, to lay additional weight on the timbers, in order to compress the snow as much as possible. The advantage of this plan is, that by pressing down the snow, instead of digging it out, the travelled part of the road remains so full that the snow does not drift on it—in fact it is sometimes higher than the general surface, because the snow is so hard in the road that it is not blown away, while that which has not been trodden is frequently taken off by wind. It is sometimes difficult to break through a deep snow, and it is best for men to walk along in front of the team, and prepare the way by making their tracks in the right places, levelling the deepest drifts, &c. After a good road has once been made, it is but little trouble to keep it so for the remainder of the season, or till the snow goes off.

MEMOIR OF JUDGE BUEL.

Among many distinguished individuals who may have justly earned the title of benefactors of our country, the memory of none is cherished with more lively respect and gratitude, by the Agricultural community, than that of Jesse Buel; and though the history of his career may not be new to some of our readers, we are convinced that the deep interest which is felt in one whose life was in so great a degree devoted to the public good, will be regarded as a sufficient reason for presenting the following brief memoir, which we have illustrated with a portrait of the Judge, and a view of the monument erected to his memory, by his family, in the cemetery of the Middle Dutch Reformed Church.[*]

Judge Buel was one of the noblest specimens of self-made men. Destitute of even the advantages now afforded by our common schools, he became, by his own unassisted efforts in the attainment of knowledge, one of our most eminent, useful, and honored citizens. Born at Coventry, Conn., on the 4th of January, 1778, he removed, at the age of twelve years, with his parents, to Rutland, Vt., where, at the age of fourteen, he was apprenticed to the printing business. After devoting himself with great assiduity to his trade for four years, he succeeded in buying the remaining three years of his time, and went to New-York, where he commenced work as a journeyman printer. He subsequently worked in this city, and was for a short time at Lansingburgh and Waterford. When in his 20th year, he, in connection with Mr. Moffat of Troy, established the "Troy Budget," one of the few papers of that day which has been continued to the present time. In Sept., 1801, he removed to Poughkeepsie, where he and Mr. Joiner, commenced a weekly paper called "The Guardian." This paper was continued but a year, when he formed another co-partnership, and commenced another weekly paper called the "Political Banner." This proved an unfortunate concern; and in about a year, through the mismanagement or dishonesty of others, involved him in total bankruptcy. Nothing discouraged by his misfortune, he pressed onward, and as early as 1803, we find him once more located, and establishing another journal. This was "The Plebian," at Kingston, Ulster county. Here he resided for ten years, and by his industry and frugality, succeeded in retrieving his losses, and acquiring considerable property. During his residence at Kingston he held, for several years, the office of Judge in the Ulster county court. In 1813, having become favorably known as an editor, he was induced, through the influence of Judge Spencer, to remove to Albany. Here he established the "Albany Argus," and the next year, 1814, was appointed State printer, which office he held till 1820, when he sold out the Argus, and retired from the printing business. Through all this period, his industry, application and study, were unremitting. "It is worthy of remark," says Prof. Dean, "that while engaged in this business, he always performed, himself, the labor essential to its successful prosecution. He was always the setter of his own types, and until he came to Albany, the worker of his own press."

But it was as an agriculturist, and by his efforts to improve the condition of the agricultural interest of the country, that Judge Buel became pre-eminently useful. He very early in life manifested a deep interest in rural pursuits, and while editor of the Plebian at Kingston, and of the Argus at Albany, frequently devoted a column or two of those papers to agricultural and horticultural affairs; and on his retirement from the latter paper in 1820, he determined to devote himself to those pursuits. That he might the better ex-

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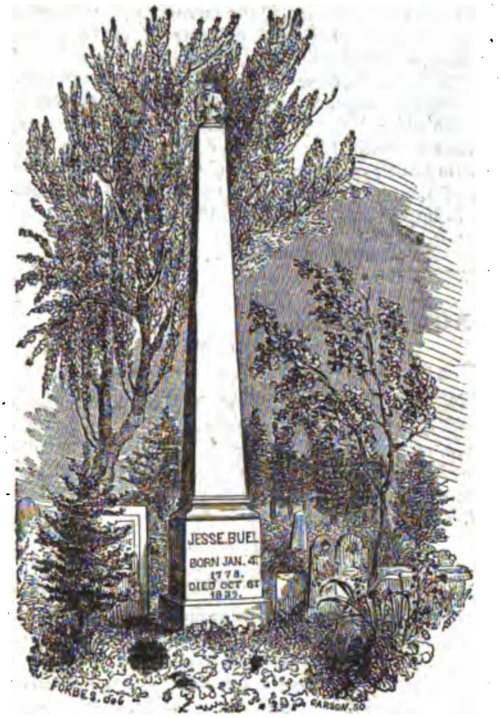
[*] The New-York State Ag. Society, proposed to the family of Judge Buel, last year, to purchase a lot in the new cemetry on the Troy road, and to remove the remains and the monument, to that beautiful burial place; but the proposition was declined, they preferring to have them remain in the family cemetery.



hibit the effects of intelligence in the improvement of the soil, he purchased, in the vicinity of this city, a most forbidding tract of land, from which to make a farm. It was a part of what was known as the "sandy barrens," lying between Albany and Schenectady, and has been described as "an open common, covered with bushes; and appearing as if doomed to everlasting sterility."

Judge Buel, however, being satisfied that this unpromising soil was capable of being rendered productive and profitable, immediately proceeded, with the intelligence and judgment which he brought to bear on all his pursuits, to improve it by fencing, clearing off the brush, draining, manuring, &c. He erected buildings, and established his residence here. In the course of a few years, the place, from having been positively repulsive, from its barrenness, became noted for its general fertility, and especially for its very fine orchard of various fruits, and an extensive and well managed nursery. While engaged in these improvements, he devoted his leisure hours to the advancement of his favorite pursuit. He officiated for two years as Secretary of the old Board of Agriculture, and the last two volumes of its "Memoirs" were prepared by him. He also republished from the columns of the Argus, a Treatise on Agriculture, which had been written at his request, for that paper, while edited by him, by his friend Gen. Armstrong of Dutchess. As another means of advancing the improvement of his favorite pursuit, he issued a number of Agricultural Tracts. He was also a frequent contributor to the old "American Farmer," the "New England Farmer," and the "New-York Farmer," the only agricultural papers published in this country previous to 1830. On the establishment of the old "Genesee Farmer," by the present proprietor of "The Cultivator," Judge B. became one of its warmest friends, and for nearly two years, previous to the establishment of "The Cultivator," was a weekly contributor to the editorial department of that paper. These papers, however, at that day, had but a limited circulation; and he wished to adopt some mode by which the benefits they afforded might be enjoyed by a much larger number of our farmers. After consultation with the few who then took an interest in the subject, the plan of "The Cultivator" was determined upon—a plan which has resulted in immeasurable good to the country.

"The Cultivator," as many of our readers are aware, was commenced under the auspices of the New-York State Agricultural Society, at the low price of 25 cents per year, Judge Buel having volunteered to edit it without charge for his services, and the late Patroon, the Hon. Stephen Van Rensselaer, and the late James Wadsworth, Esq., of Genesco, having pledged themselves to pay whatever expenses might be incurred in the publication, over its receipts, for one year; for no one anticipated that the sales of the paper would pay the expense of the publication. But so nearly were the accounts balanced at the end of the year, that Judge Buel, at the request of the Society, paid the bills and took the establishment into his own hands, and gradually enlarged the paper, and increased its price to $1 a year. He continued to conduct it, with increasing usefulness to the public and honor to himself, till his death, which occurred suddenly on the 6th of October, 1839, at Danbury, Conn., while on his way to New Haven, to deliver an Address before the Agricultural Society of that county.

In addition to the works already enumerated, Judge Buel was the author of the Farmer's Companion, a work written at the request of the Massachusetts Board of Education for the District School Libraries of that State, and the Farmer's Instructor, 2 vols., prepared for Messrs. Harper's series of books for the District School Libraries of this State. The productions of his pen secured him a wide reputation at home and abroad, and he was elected an honorary member of many distinguished societies in this country and Europe.

Judge Buel adopted as a motto for "The Cultivator"—"To improve the Soil and the Mind;" and while he was indefatigable in his exertions to carry out the first object suggested, he never for a moment lost sight of the latter. He was an earnest advocate for self-instruction, a noble example of which was presented in his own attainments. In obtaining the large fund of knowledge which he possessed, he was not even aided by the advantages of a common school education, having never attended school but six months. His views in regard to the improvement of "the mind," through the medium of publications, are expressed in the following extract from the first number of "The Cultivator:"

"To Young Men we would especially appeal. You are destined soon to occupy the stage of public action, and to fill the important stations in society. *Now* is the time to *prepare* for these high duties, as well as for profit and distinction in your business. Your characters are but partially formed, and are yet susceptible of receiving good or bad impressions, which are to last through life. It is important to you, to your friends, and to society, that these impressions should be for good. We will lay before you rules and examples of the wisest and best men, to aid you in the formation of your characters—to enable you to become intelligent and successful in your business,—useful and respectable in society,—and beloved and happy in your families. Do not object that you have no *time* to read. Few young men labor more hours than did Benjamin Franklin, or are more humble and self-dependent than he was in his youth; and yet Franklin found abundant time for self-instruction; and so indefatigable and successful was he in his studies, that he became one of the most useful and celebrated men of his age. We need not limit the remark to Franklin: most of the distinguished men of the day have risen from humble stations by their own industry and frugality, and have acquired a great share of their knowledge in the hours not allotted to ordinary business. Your winter evenings are your own, and may be applied usefully. They may be computed at one-fourth of the day, or one entire month in a year. Time is money: and the young man who appropriates this month to the acquiring useful knowledge, does more to add to his future fortune, to say nothing of his intellectual wealth, than if he received pay for this month, and loaned it upon interest. Knowledge is in another respect like money: the greater the stock of it on hand, the more it will administer to the respectability and enjoyments of life. But knowledge is not to be acquired without exertion, nor is anything else that is useful in life. It is the labor we bestow in acquiring an object that imparts to it an intrinsic value. It has been well said, that 'although we may be learned by the help of others, we can never be wise but by our own wisdom.' It is the humble design of this monthly sheet to excite a laudable ambition to improve the mind as well as the soil."

THE FARMER'S NOTE BOOK.

Transplanting Large Trees.

In the spring of 1846, I determined on the removal of an elm tree that flourished in open grounds on rather wet soil of muck and clay. I chose a tree standing in this situation, believing there would be no tap roots to hinder raising it to the best advantage, and knowing by experience that the removal of the great majority of the different kinds of trees from low wet lands to those high and dry, does not retard the growth provided proper caution is used in transplanting.

A tree that is to stand out exposed to the winds and sun, like an elm, should be selected in the fields, where it has formed a natural low top and stout trunk, and where a vigorous growth of roots is attached, especially if the tree be large, as this was—one foot in diameter at the butt, aud about twenty-five feet in height.

A trench was dug about three feet deep around the tree, three feet from the body, cutting off all the roots that reached the ditch, leaving a spot of earth for the tree to stand upon of seven feet in diameter. The soil was all returned to remain through the season, that new and vigorous roots should spring forth in abundance to supply the wants of the tree. Last spring, in throwing out the earth again carefully, we found that new roots had appeared in all directions. After excavating well under the tree, it was easily upset by the aid of oxen and chains, attached to a limb that we designed to amputate, and cared not if the bark was marred a little. The earth was removed from the under side by bars and picks, which reduced the weight, as we judged, to about two tons; the diameter of the mass was seven feet, and over twenty inches in thickness. After rolling it on to the centre of an ox sled, the limbs extending backwards, with a stone-boat well secured under that part of the top which was most exposed, it was removed to a loamy soil on the church common, where a solid rock underneath laid within twenty inches of the surface. The tree was very easily uprighted, the top being much the lightest; a small portion of the ends of some of the limbs were cut off, and a few removed entire. We were careful to crowd earth and small stones under the roots into every unoccupied spot. The tree was not set so low by about eight inches as in its natural state, but after spreading around the tree the loose soil, and then about two tons of stones, it was able to take care of itself, as it proved to have received but little check, though the summer was dry and hot.

The advantage of placing stones upon the roots, is to hold them firmly down, that they may not be acted upon by winds. These, with a load of chip manure, which was cast upon the stones, kept the earth moist and cool. The roots of the elm extend to a greater distance than those of most of our forest trees. In transplanting they are generally not well preserved, which is the reason of so many failures with this, the most beautiful of all the trees of America. By clipping off a portion of the roots in the spring, previous to moving, as in this case, the life of the tree is insured, and it is given one or two years' start in growth. S. W. JEWETT. *Weybridge, Vt., Dec.* 1, 1847.

Fall Plowing.

November is the best time for plowing lands that are to be planted the next spring. I am aware that I am on the borders of controversy in making this statement; but it seems to me that the following advantages arise from the practice—

1st. At this season the team is stronger, and the weather more favorable for breaking up grass land, than in the spring.

2d. As the spring of the year is the most hurrying season to the farmer, it is a great help to him to have the plowing done the fall previous.

3d. In turning the land over so late in the season, nothing green starts up, and the frosts of winter immediately following, the grass roots are *killed*—the surface also, exposed to the action of the frost, is mellowed, and in the spring the land will be divested of every living thing, and crumble down before the harrow as fine as a garden bed. The labor in planting and weeding the corn and potatoes is considerably lessened by this means.

4th. The winter arrangements of the worms are entirely reversed. I speak particularly of the cut-worm, my land not being infested with the wire-room.

Fall plowing on my land is a complete remedy for the ravages of the cut-worm. Contrary to usual practice, a small field, about one and a half acres, was broken up last May and planted to corn. In planting, I noticed that there were great numbers of small cut-worms in the land, and took the hint at once that there would be trouble in due time. By the time the corn was up, the worms were ready for operations, and although we went over the field three different times, destroying all that could be found, they still got the mastery, and at weeding time not one hill in two hundred was left standing. The field was replanted to the small, early Canada corn on the 15th of June, being careful in planting to kill all the worms that could be found. Two days after this, two men destroyed between 5 and 600 of these worms in an afternoon on the same field. The cut-worm does not usually work in corn-hills after the 20th to 25th of June, and as the second planting did not come up till after the 20th, it stood well. Twice as many hills were planted in the rows as were planted originally of the larger corn, and I harvested this fall over 80 two-bushel baskets of ears of ripe, sound corn from the field. The crop was rather too expensive; but as the land was very well fitted in the way of manure, I was determined not to be beaten by the worms if hard fighting would do any good. The remainder of the field, left in grass, seemed to be full of these worms, as I ascertained by striking in the hoe in a number of places; and I supposed at the time that the crop of grass would be materially injured by them. On the contrary I could not discover that it was, the swaths being stout and heavy at mowing time.

I have taken the precaution to plow the remainder of this field *nine inches deep* this present month, and fully expect by this means to save myself from a like mishap next spring. F. Holbrook. *Brattleboro, Vt., Nov.* 15, 1847.

Culture of Madder.

Having heretofore presented to the public, the way to plant and cultivate madder, I have thought best to give, as near as I could ascertain, the expense of raising and fitting for market one acre of madder:—

Cost of the seed, which is the upper part of the root, would be,	$15 00
Plowing and planting,..	5 00
Tilling each season, $5 for each season,......................	15 00
Digging one acre...	20 00
Washing, drying, and grinding,.................................	25 00
Interest on the land, $7 per year, four years,................	28 00

An acre of Madder, planted in the old way, would yield at four years' old, from four to five thousand lbs. of merchantable madder, which, at $16 per hundred, would amount to from six to eight hundred dollars.

I have one acre planted on raised hills, as recommended in the February number of the Cultivator, 800 hills to the acre. I dug one hill of the piece this fall, an average hill, which had been planted 17 months or two seasons; the roots obtained from this hill, after having been washed clean, and the water dried off, weighed 17 lbs., which, allowing 5 lbs. of green roots to make 1 lb. of ground madder, the above would, if dug this fall, yield 2,720 lbs. of ground madder, which, at $16 per cwt., would bring $435.20. Madder planted the old way generally gains 100 per cent. the third season, which, if the above-named acre should do, it would next fall yield 5,440 lbs. of ground madder. The fourth season it has generally gained 60 per cent. when planted the old way.

I am much pleased with the new method of planting with raised hills. I have no doubt but more madder can be raised by this method of planting in three years, than by the old method in four, from the same ground.

If any gentlemen interested in the madder business (should doubt my statements, or would like to obtain information respecting the business,) will call on me, I will satisfy them of their correctness, and give them any information necessary for the cultivation and preparation of madder for market.

You may expect to hear from me once a year about the madder business, if my hand is able to write. James Eaton. *West Winfield, Herk. Co., Y. Y., Oct.*13, 1847.

Making Shingles by Machinery.

A correspondent with the signature of "Reader," writes us from Kent, Conn., in regard to a process of making shingles by machinery. He states that by the mode which he describes, timber which was formerly thrown away as too winding for making shingles by the old process of riving, can be worked up almost as well as straight-grained timber. The first thing is to construct a vat for the purpose of boiling or steaming the blocks, which are previously sawed the length required for the shingles, and quartered. "Let the blocks be thoroughly steamed or boiled through by means of flues which should be placed in position to heat the water in the quickest manner." The apparatus for cutting is described as follows:

"The machine for cutting is of simple structure, easy to be kept in repair, and requires but a moderate horse or water power to work it. It consists of a gate of cast iron weighing about 100 lbs., to which two knives are attached in such a manner that two shingles are produced by each descending motion of the gate, which slides in vertical grooves. Each shingle is produced in as perfect a form as can be made, being jointed at the same time they are cut, and the edges made parallel. No inconvenience arises in laying the shingles on a roof—they do not *run*, as it is called, and they are free from *shakes and splits*. The smoothness of surface is another item which makes them superior to *sawed* shingles for carrying off water. The process of steaming improves the texture of the timber, and when the shingles become dry, the wood is more compact than if seasoned in the ordinary way. In the old method, one-half at least, of a good shingle tree was thrown away as useless, or only to be used as firewood; by the improved process, double the amount of shingles are produced, and at a great saving of expense. The expense of the machine is about $50."

We understand that further particulars can be learned by application to Eben S. Peters, Kent, Litchfield county, Connecticut.

Sheep—Weight of Fleece at Different Ages.

Will some one give information as to the usual difference in weight between the fleeces of old and young sheep. I have kept an account of the weight of the fleece of one Merino ewe, for seven years. The result is as follows: At one year old, she gave 4 lbs. 8 oz.; at two years old, 4 lbs. 13 oz.; at three years, 5 lbs.; at four years, 4 lbs. 12 oz.; at five years, 4 lbs. 6 oz.; at six years, 3 lbs. 13 oz.; and at 7 years, 3 lbs. 3 oz. The average result from a number of sheep might be quite different. But should it be similar to the above, it would seem unprofitable to keep sheep longer than until four or five years old, except perhaps individuals of superior excellence, as the wool degenerates in quality as well as quantity. H. C. B. *Otsego Co.*, 1847.

Construction of Ice Houses.

Having in the course of thirty years had more or less acquaintance with ice-houses, I propose to make some remarks, through the medium of the Cultivator, in regard to their construction. I am led to do so at this time by an article with plans, &c., in your November number.

I have known many plans for ice-houses, varying in expense from a sum that would build a comfortable farm-cottage down to, and seldom less than fifty dollars. When my father removed to this country, about forty years ago, he found an ice house upon the place. It was built, or rather dug out of a side-hill. It was a hole eight feet square and sixteen feet deep, in gravel and sand. The sides were planked up and kept in their places by three cross-planks or batteries, one at bottom, another at top, and one half-way between the others. These cross-planks kept the sides from falling in. The roof was formed of joist, setting on two sides of the pit, at the surface of the ground, and meeting at the top. These were roughly cross boarded, and over all was a thick covering of thatch. The gables were boarded up with about as much care as is taken in boarding ordinary barns, leaving a hole five or six inches in diameter in each end. When this place was to be filled with ice, a thick bed of clean straw was laid over the bottom, and bunches of straw were opened and placed around against the sides. As the ice was thrown in, it was broken into small pieces with a large mallet, and as the hole was filled the lining of straw was carried up to the top. The ice was heaped up as high as it would lie in the middle, and during cold weather it was left exposed, and quantities of pure spring water repeatedly thrown upon it, that it might become as far as possible one mass. As soon as the weather began to moderate, the whole was covered with straw, the door was closed and locked, and the ice left till wanted.

This ice-house was surrounded by trees, but after a few years they were removed because the shade occasioned dampness. We used a great deal of ice—indeed we never thought of economizing it—but I never saw it fail. The house was much larger than is necessary, and being near a large city, where timber was scarce and dear, it was much more expensive than is generally needful, yet it cost much less than most I have seen since. I am now convinced that this is the true plan of a cheap ice-house, and every farmer can make one for himself—of logs, slabs, and straw—the only article to be purchased being one pound eight-penny nails.

Ice-houses above ground are well enough for ice-companies, where large buildings are wanted to contain large masses of ice. The greater the mass, the less in proportion is the surface exposed. But ice-houses above-ground will never answer for *small* concerns, and they are quite too expensive if they would.

Within a few years I wanted an ice-house on my farm; and as I am so unfortunate as not to be able to live on the farm, and can only visit it a short time once a year, I have to entrust operations of this kind to others. Various schemes were tried; first, it was resolved that the building should be *here*, because convenient to the house; next, that it should be *there*, because out of sight; but in digging down they came to a rock, and then thought it was deep enough. My attention was attracted by a neat, small, stable-looking frame structure, the outside painted. On opening it, I found it double-sided and filled between with cut straw, well packed in; it had double doors, and a loft to stow away empty casks, and to deposite tools when not in use, &c. I was told that this was the new ice-house, and that it had been well filled. Perhaps it was not properly constructed; but whether so or not, or whether it had ever been *well* filled, *there was no ice there on one of the last days of July.*

I now took the matter in hand myself, and directed that my orders be implicitly followed. I selected the site—a fine sandy and gravelly side-hill, close by a pure and beautiful stream. The size of the ice-house being about six feet square by ten feet deep on the lower side—the materials common logs, notched together at the corners—holes as above for free circulation of air in summer, and no shade over the thatch—the cost limited to ten dollars. But the work did not cost near that sum, and the blocks of ice were dragged over the snow from the river to the house door without ox or horse or cart. The next summer I never wanted ice, and I found the only mistake was, putting the magazine so convenient to my neighbors that it was no fault of theirs that I had it.

The experience of a near relation is just the same. He placed his ice-house on a knoll in the middle of a pasture lot, far from any shade. It is larger than mine, and he painted the sides above ground, and roofed it with shingles; thus making it more expensive, but not better, if as good as mine, and certainly no more durable. His family is literally prodigal of ice—a wheelbarrow full at least being brought to the house every day, and plenty given to every one that asketh it.

Ice is one of the best medicines in cases of fever, and no family should be without the means of procuring it in case of need. I have known instances of cures by the judicious use of ice in desperate cases, and iced drinks and ice kept in the mouth when permitted by the physician, are great comforts and alleviations at least. C. C.

N. B.—Always keep the ice well covered over with clean straw.

Western Wool.

There are some very fine flocks of sheep at the West, especially in Washington county, Pennsylvania, and Ohio and Brooke counties, Virginia, and several counties in Ohio. There is a peculiar softness and felting property in the fibre—and the best wool of the West is sought after with great avidity by the manufacturers. It not only readily sells, but also for fair, remunerating prices. The sheep from which the best wool is taken are small, and generally show rather feeble carcase and constitutions. The breeders of fine sheep at the west seem to have committed the same error with the breeders of the early Saxons—gone for fineness, regardless of size of carcass and strength of constitution. This error can be retrieved and must be, or the fine flocks of the west will be lost to the country. This must be done by crossing with the larger, stronger constitutioned, and almost equally fine rams of the *best* flocks of the East. The finest of the Rambouillets—and some of the choicest and heavy shearing rams of the Eastern Saxons would be admirable crosses with the fine wooled sheep of the best flocks of the West. The time is at hand when the opportunity of making such improvement will be given to the West. A large and splendid flock is now being concentrated near Vanceburgh, Kentucky, on the fine land for sheep husbandry of that portion of the State. I understand, also, that a gentleman in Wheeling is about to establish a flock of sheep, gathered from the East, in his neighborhood. B.

The Last Wheat Crop in Michigan.

Our crops here have been good this season, and prices fair. My son's wheat last year averaged thirty-four and a half bushels to the acre. This year his and mine together averaged thirty bushels and one pound to the acre, notwithstanding the unusual severity of the winter. This quantity is rather above the average of the farmers generally in this vicinity. Much depends on the manner of getting in—the time—the kind of wheat, and quantity put on the acre. We use a trifle more than one and a half bushels, and think we shall increase it to one and three-fourths to the acre. Our time is from the 8th to the 20th of September, and we use the *Soule's* wheat only, having carefully noticed, since its introduction here, that it has stood the rust and winter better than any other variety. Aug Finney. *Hudson, Lenawee Co., Mich., Nov.*, 1847.

Vineyards of France.

Messrs. Editor—Your correspondent, Ik. Marvel, gives us some marvellous information, when he informs us that in the best vineyards of France, "but little attention is paid to the variety of grape cultivated, as the quality of the wine depends less on the kind of grape, than the exposure." Such is not the fact. The quality of the wine depends more on the skill and care in manufacture, than soil or exposure. Many vineyards lose their reputation by a change of owners, and others whose wines for years had no reputation, and were disposed of at the lowest price, have in a few years attained the first rank. Some of the best vineyards in France are fully exposed to the North. With us, each variety of grape, be its location and exposure what it may, produces a wine readily distinguished from all others. In some seasons, a northern exposure ripens the fruit better than a southern one. The aroma and flavor of the Catawba is the same in every soil and exposure, and the quality chiefly depends on the manufacturer. The pure juice, without sugar, spirit, or other addition, yields the best wine. The manufacture of butter is plain and simple, yet not one housewife in twenty makes it of the first quality. The same is true of the manufacture of wine. A Vine Dresser. *Cincinnati, O., Nov.* 12, 1847.

Large Crops.

In a late excursion at the West, I noticed from time to time, short paragraph accounts of large crops of corn, and other products, in the valley of the Ohio.

For example:—In the notice of the annual fair of the Washington Co. (Ohio) Agricultural Society, J. W. Dana, Esq., of that county, is said to have raised a crop of corn, amounting to about 145 bushels to the acre—and in Butler county a gentleman is said to have raised 175 bushels of corn to the acre.

Will Mr. Dana, with whose farm we are somewhat acquainted, give us, and the public, through the columns of the Cultivator, published at Albany, a brief and luminous account of his method of preparing and tilling the grounds on which he raised this crop? Corn being a great staple production over the country, and especially over the Ohio valley, Mr. Dana will be rendering a special service to the cause of agriculture, by giving us his method of cultivation.

I would also respectfully ask other growers of large corn crops in the west, to communicate also with this paper—inasmuch as the Cultivator has a wide circulation over the country. B.

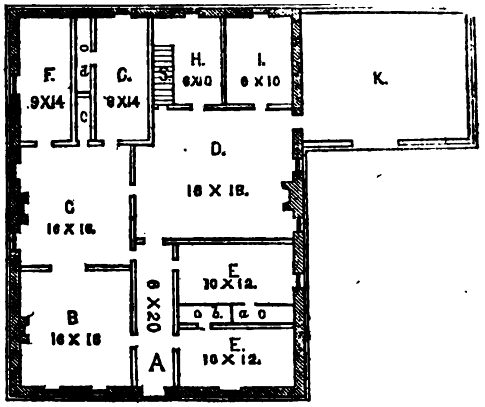
[We know Mr. Dana and his farm, and should feel greatly obliged if he would comply with the suggestions of our correspondent in relation to his corn crop.

Improvement in the Preparation of Paints.

The perishable nature of paints, and their failure to afford protection to buildings but for a short time, has latterly been a subject of much complaint. Mr. Richard Dally, claims to have discovered a remedy for this difficulty. He states that one cause of the failure, is the adulteration of white lead and colored paints, by the sulphate of barytes. Pure white lead, however, he states, though "admirable for every purpose of interior decoration and ornament," is unfitted to stand exposure to the weather, and when thus exposed, rubs off like whitewash. Mr. D. says—"At the suggestion of an aged and experienced painter, Mr. Henry Roome, the subscriber was induced to make an experiment twenty years since, and from its remarkable preservation, in comparison with painting as generally performed, (the principles having been corroborated by recent discoveries in chemical science,) he can promise a degree of durability to all paints exposed to the weather, that shall place the art of house-painting in a much more favorable light than ever before—for singular as it may seem, most of the operations of the painter have hitherto been the result of accident, and not of any fixed principles."

He also states that by the application of his discovery, black, yellow-ochre, Venetian-red, and Spanish-brown, will be rendered nearly indestructible, "and will continue for a generation unaffected by atmospheric action, thereby furnishing ample protection from the weather for expensive steeples, rail-road and other bridges, roofs, fences, &c."

We are informed that paints and oil, prepared by Mr. Dally's mode, are for sale at the corner of Burling slip and Pearl-st., New-York.



Plan of a Farm-House.

Messrs. Editors—I send you another ground plan of a cottage, in which I think three things, very desirable for farmers in ordinary circumstances, are attained, viz., sufficient room, convenience, and cheapness. The size is 46 by 34 feet. *A.* represents the front hall, 6 by 20 feet; *B.* the parlor, 16 by 16; *C.* the family room, 16 by 16; *D.* the kitchen, 16 by 18; *E. E.* two bed-rooms, 12 by 10 each, including the clothes presses *o. o.*; *F.* the family bed-room, 14 by 9; G. the young children's bed-room, 14 by 8;—young children should always sleep near their parents, on account of sickness and sudden calls in the night;—*H.* store-room 10 by 6; *I.* pantry or milk-room, 10 by 7; *K.* wood-house; *c.* china closet for the family room; *o.o.*, clothes presses; *S.* chamber stairs. In the above plan there are no unnecessary doors, and every room is convenient for the business to which it is appropriated. The two bed-rooms opening from the family room may be sufficiently warmed in winter by opening the doors a short time, and the good housewife can oversee the affairs of her family and kitchen without taking many unnecessary steps. The kitchen is near to the front door, the family room, the store room, pantry, and wood-house; and as to fire-places or stoves, these must be left to every one's wishes. I have designated a place for stairs, thinking it would be well to have at least a floor laid over the chamber, for such places are always applied to some use. Occasionally and for temporary purposes, if more room be wanted, a bed may be put into the parlor.

The Cost.—Such a cottage as the above, built of brick and completely finished, with a cellar under the whole—the walls to be 8 inches thick and 12 feet high, and ten feet between joints—can be built in Buffalo for $800. H. A. P.

The Wood Plow.

I was intimately acquainted with Jethro Wood for nearly thirty years, residing within five miles of him during the whole period in which he was engaged in improving the plow. In the early part of 1812, I tried to procure one of Peacock's, near Philadelphia, but failed; and on my return, I spoke of my disappointment to him, when a long conversation on improvements in the plow ensued. From that time the subject continued to claim his attention. In 1814 he obtained his first patent, the specifications for which I drew. The chief improvements (if my memory is correct,) consisted in the superior *shape* of the cast-iron mould-board, and a *small wrought share*, fastened on with screws. I had one of the first that was made, *probably* before it was patented.

To understand the importance of these improvements and of those which followed, it may be necessary to learn how farmers had to manage in early times; and for this purpose I give an extract from THE PLOUGH BOY of 1821, vol. 3, page 5, with some *verbal* alterations:

"Ten years ago, the farmers of this town were satisfied with the Bull plow. They thought it superior to every other among roots and stumps. It was easily drawn back when it got fast, for it generally had no coulter; the share but little slant, and a short nose.

"Hard gravelly ground however, soon dulls a plow share. Many of us had to go far to a blacksmith's. While we were gone, the team was idle at home. When we arrived the shop floor would be partly covered with plow shares, but *first come, first served,* was the rule. From one-fourth to half a day was often lost in this way. But this was not all our trouble. The share sometimes came back in a different shape—it no longer ran like the same plow. It often had too much or too little *pitch*, and the share warped in hardening. A load of dirt fastened on it," &c.

Such was the state of things when JETHRO WOOD introduced his plow. Its *permanent shape*, and *cast-iron edge*, wrought a total change in our condition, but not without great opposition for a time. He told me that all his friends, (with one or two exceptions,) endeavored to discourage him from trying "pot-metal!" and the same opinions were prevalent when he proposed to dispense with the old sheath or standard, and substitute a projection from the upper edge of the mould-board, to pass through the beam. His language to me at that time was, "I intend to make it as simple as a skimming dish." For this improvement alone, (whether it pass through or be fastened under the beam) his name should be immortalized, and no candid person can deny him extraordinary merit, when he considers that every plow, down to that time, had been encumbered with a heavy sheath of wood or wrought iron—expensive, and liable to get out of order.

In his first patented plow, nearly a dozen screws were employed; but in that of 1819, not a screw was seen; and the plowman was rendered independent of the blacksmith—avoiding long bills and great loss of time.

The exercise of mind, and amount of labor to perfect these improvements, can scarcely be appreciated by those who have not been engaged in similar pursuits. It was a new field, and everything had to be learned by experiment. To discover and procure the best materials for patterns, as well as to prepare them, employed him for a long time; and most men would have shrunk from the difficulties that met him at the founderies. Often he had to overcome the awkwardness or unwillingness of the moulders by presents, or by showing them how to succeed with his own hands.

I am satisfied that all his patented improvements were inventions of his own—originating in his own mind; and to avoid encroaching on what others had invented, he had every volume within his reach that treated of plows, (including several Encyclopedias,) carefully examined for that purpose.

To JETHRO WOOD'S name belongs the honor of rendering the plow that *cheap* and *efficient* instrument that we now find it—enabling us to cultivate our fields at less than a quarter of the former expense, and saving millions to the country. DAVID THOMAS. *Greatfield, Cayuga Co.,* 12 *mo.* 10, 1847.

House-Feeding Sheep.

Richard Simeon, Isle of Wight, England, has very successfully practiced stall-feeding sheep for several years, one house containing 140 stalls, the other 150.

The stalls should accord with the size of the sheep, it being essential that they should not be so large that the animal can turn round and dirty the trough. Each sheep is confined by a leathern collar, attached to a slight chain, furnished with a couple of swivels, sufficiently long to secure comfort to the animal, but not long enough to hang back beyond the division of his stall, and to interfere with his neighbor. A feeding trough is placed at the head of each sheep, divided for turneps at one end, and chaff, meal, &c., at the oher, and a small rack for clover above. A cast-iron trough to every two sheep, is supplied with water by a stop-cock from a common cistern. A manure trough, two feet wide and deep, made of brick and water lime, and covered with a wood grating, receives the manure, the sheep standing in rows back to back. This needs cleaning once in ten weeks. Shutters to the stalls regulate the amount of fresh air in cold and mild weather. The manure is of the richest quality, equal to guano. The sheep are healthy, and thrive fast, gaining usually two and a half pounds per week, often three pounds, and in some rare instances a pound a day.

These advantages could not be less in our severer winters. These facts were stated in the Gardener's Chronicle.

Farming on a Large Scale.

According to a statement of S. S. Griscom, in the Farmer's Cabinet, the farm of R. R. Bolling, below Richmond, Virginia, consists of 7000 acres of excellent land; 2,700 acres are under cultivation, all having been limed, and enormous crops of clover turned under at every plowing for a crop. The wheat-field has 910 acres, about 20 bushels per acre. There are 545 acres in corn, estimated to average 30 bushels per acre. All the buildings, barns, stables, &c., are of the best construction, aud in the most perfect order, and the best management and strict economy are maintained in the manufacture of manure. A spacious barn is furnished with a steam-engine, working a saw mill for the use of the farm, a mill for grinding corn-meal, another for grinding plaster,—and threshing machines capable of cleaning out about 1000 bushels per day. While the writer was there, they averaged 800 bush. wheat per day, threshed, cleaned, and put in the granaries—yet so large is the crop, that nearly a month is employed at this rapid rate, to thresh the whole. The threshers are on the second floor, from which the wheat falls into the fans on the floor below; it is then taken by elevators to the third story, where it passes through screens, and then into the bins, almost without any assistance from manual labor. A cupola surmounts the barn, in which is a large clock, with four faces, so that the time can be seen from nearly all parts of the farm, and the bell which strikes the hours can be heard much farther.

The proprietor offers very liberal terms to northern men of enterprising, industrious, and virtuous habits, to purchase and settle upon his lands.

Sound Views.

DR. P. CRISPELL, in his address before the Ulster Co. Ag. Society, makes the following sinsible remarks in relation to the necessity of understanding the principles of agriculture, in order to prosecute farming successfully.

"The time has been that a man was ridiculed if he attempted by education or by study, to prepare himself for attending to his farming scientifically. It is a fact which need not be disguised, that by many, the book farmer, as he is sneeringly called, is looked on with contempt and ridicule. It seems to be the opinion of those who are opposed to education on this all important subject, that farming is simply plowing, and reaping; and that manual labor is the main and almost only element that is required to make the farmer.

But this is far from the truth. To be a farmer, who shall be most profited by his farming operations, it is necessary that he shall well understand his business. There is no calling that requires more the exercise of discriminat on, reasoning and calculation, the comparison of cause and effect, than does that of the farmer."

"But he thinks it important the farmer should know how every kind of labor required on his farm should be performed. The advantage of this is obvious; for it will in many cases be difficult to have work properly executed, unless the farmer is capable of practically showing how it should be done. Dr. C. remarks—"It is as necessary for the farmer to know how to hold the plow, to sow the seed, and how to do all the work on the farm, as it is for him to be scientifically acquainted with the condition of his soil. It therefore becomes the duty of the farmer to teach his sons to do all that will be required of the farmer as a laborer to do, and not only to do for the purpose of saying it is done, but to do it well, for by doing work well the greatest benefit will result from it."

Productive Small Farm.

The Cooper farm, near Bushwick, Long Island, according to the committee of the New-York Farmers' Club, consists of only 30 acres, the proprietors being young men, who came in possession only a few years ago, when the land was very barren. With the help of four men, and additional help in picking time, they have the past season supplied New-York with the following articles:—

342	bushels peas in pod,	yielding	$256
1000	" potatoes,	"	687
1200	" tomatoes,	"	600
1200	" bush beans,	"	528
			$2071

In addition to the above, there remained unharvested at the time the report was made—

500 bushels potatoes, by estimate,
4000 poles thickly covered with Lima beans,
4 acres corn,
1½ acres Blue-top turnip,
1½ acres cabbage, 5000 to the acre,
Hay for all their stock,
1-20 acre Cayenne pepper, estimated 25 bush.,
Also, 75 bushels wheat.

Horses of Speed and Bottom.

The *National Intelligencer* furnishes an account of the extraordinary performances of some Californian horses used by Col. **Fremont** in traversing a section of Upper California. It is stated that Col. F., with two attendants, performed a journey of eight hundred miles in eight days, including all stoppages and nearly two days' detention. Each of the party had three horses, nine in all, which took their turns under the saddle. The six loose horses ran ahead without bridle or halter, and were kept to the track by the riders. When a horse was wanted for a change, he was caught with the *lasso* thrown by one of the men, the saddle and briddle transferred to him, and the other horse turned loose. This change was made at distances of about twenty miles. The usual gait was a sweeping gallop. The way was over a mountainous country, much of it uninhabited, and many defiles to pass. They travelled at the rate of one hundred to one hundred and twenty miles a day, until they reached a city, San Luis Obispo, about half way to their place of destination, which was Monterey, on the Pacific ocean. At San Luis Obispo the nine horses were left, and eight others taken in their places. With the fresh horses the party pursued their journey to Monterey, and returned to San Luis Obispo. Two of the latter horses had been presented to Col. **Fremont** by a Californian, (Don **Jesus Pico**,) and were considered specimens of a famous breed called "*los canalos*," or the Cinnamons, from their being of a cinnamon color. These two horses were brothers, one a year younger than the other. To test their powers, they were, at the request of the Californian who had presented them to Col. F., put to a severe trial. On leaving Monterey, late in the afternoon, the elder horse was first put under the saddle, and ridden thirty miles, when the party stopped for the night. The next morning the same horse was again taken by Col. F., "and for ninety miles he carried him without apparent fatigue." It was still thirty miles to the place which was to be the end of their day's ride, and the Californian insisted that the horse could easily accomplish it; but Col. F. would not put him to the trial. The saddle was therefore shifted to the younger horse, and the other allowed to run loose for the remaining thirty miles. "He did so," says the writer of the account, "immediately taking the lead and keeping it all the way, and entering San Luis in a sweeping gallop, nostrils distended, snuffing the air and neighing with exultation at his return to his native pastures, his younger brother all the while running at the head of the horses under the saddle, bearing on his bit, and held in by his rider." The eight horses made a hundred and twenty miles a day till their return to San Luis Obispo, when the nine horses that had been first taken were again brought out, and the remainder of the journey performed with them at the rate of a hundred and twenty-five miles a day. It is stated that the grass along the road was the food for the horses during the journey. They are said to be trained with great care, and exhibit remarkable sagacity and spirit. Could not Col. **Fremont** procure a few of the best of these horses and send them into the States? If they are what the account to which we have referred represents, they would be the most valuable *trophy* which the conquest of California has yielded us.

Influence of the Press on Ag. Improvement.

Mr. **Payson** in his address before the Essex county (Mass.) Agricultural Society, says—"To enumerate *all* the improvements which have been made in agriculture for the last half century, would take too much time. *One*, not only an improvement in itself, but the *basis* of all other improvements, must not be omitted, and that is the diffusion of agricultural knowledge by the newspaper press. Slowly, silently, almost by stealth, without the knowledge of the man himself, this mighty engine undermines old prejudices, and teaches the farmer that however independent he may be, he is not so as that the experience of others will not profit him. Most of us have become willing to seek *directions* even though they may be contained in a book. We are becoming more like liberal, freeborn and aspiring men."

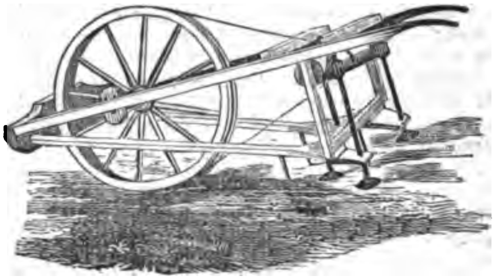
In relation to the same subject, Mr. I. S. **Hitchcock**, in his address before the Oneida county, (N. Y.) society, observes—"A medium of communication between farmers was found to be indispensible to the advancement of their interests, and the periodical agricultural press was established. That agricultural journals are among the most decided, and least expensive means of promoting agriculture, no one who has been favored with their perusal for any length of time, will pretend to deny. While their influence has been highly beneficial, they have injured no one, and since their utility has been fairly tested by experience, that farmer is guilty of an unpardonable inattention to his true interests, who neglects to provide himself with a well conducted Journal of this kind. I am aware there is a prejudice against what some are pleased to call book-farming. And what is this book farming in relation to which such unfounded and untenable prejudices prevail? Farmers communicate to each other the results of their experience in raising horses, cattle, sheep and swine, the best and most economical modes of manuring their lands, the most profitable crops, and the best manner of raising them, the best breed of animals, and the best modes by which they may be fattened—in short, everything relating to the occupation of the farmer. The results are committed to paper, go through the press and become a book, and those who choose to be aided by the experience of others, as there detailed, are guilty of book-farming."

Construction of Fences.

By many, fences are always considered as unsightly objects for enclosing grounds, and all will admit that they may detract very much from the appearance of premises they enclose. In very few cases can they be considered as really ornamental. Most persons seem to have an idea that to have a fence look well, it is only necessary that it should be expensive; and if it is expensive and costly, and somewhat different from others in its construction, it must, as a matter of course, look well. This view of the case appears to me to be entirely wrong. There is no reason why a fence, built with much labor and expense, should of necessity appear well; on the contrary, the more labor and expense, unless the design conforms to, and is in keeping with the buildings and grounds enclosed, the more will it appear out of place. As in building houses, much money may be expended in trying to render it ornamental, without producing the effect desired, merely for want of adaptation. A fence, to appear well, should be appropriate to the buildings and grounds to which they belong. It should be so constructed as to accomplish the ends for which it is required—that is, protection—and should possess strength and durability. These are some of the things necessary in a fence, and without them no fence can appear well. A good, plain, substantial farm-house, should not be surrounded by a light fancy fence, neither by an expensive ornamental one, but by one whose appearance would indicate it to be designed for service, and for protecting the ground which it encloses from all encroachments. On the other hand, a small enclosure around a cottage, while it should be designed for protection, need not be expensive, and at the same time may be made somewhat ornamental. In enclosing a large and expensive ornamental building, it would not be appropriate to place a common farm fence around it, or one of a light and fragile structure; but it should be of a character to correspond in some degree in style and finish with the building enclosed.

To explain my meaning, in my immediate neighborhood, a handsome and expensive brick building, costing from four to five thousand dollars, is enclosed with a fence made with small planed posts about four inches square, with large thin caps, and small rails framed into the posts of about twelve feet in length; into these rails are inserted round pickets, about one inch in diameter and four inches apart. These are painted green, and the remainder of the fence white. The height of the top rails as 3 ft. 3 inches, and the posts project 12 inches above it. Perhaps you will say, it is singular that a man should have sufficient taste to build a handsome house of good proportion and appearance, and not see the propriety of having a fence to correspond with it. But it is easily accounted for. In building, he copied from a house already erected near one of our cities, but he forgot to copy the fence enclosing it. When he came to build this, he exercised his own taste; hence the strange incongruity of appearance. It really detracts from the value, as well as looks of the place. The fence is sufficiently expensive, but sadly deficient in design, and is of very little protection to the grounds, because not high enough to prevent cattle from getting over it. This is but one instance in my own immediate neighborhood. Again, I know of examples where the fence is much more showy, and attracts more notice than the buildings and premises they enclose. These are perhaps extreme cases, but are such, as far as my observation goes, as are of not unusual occurrence.

Cannot you suggest to your readers something on the subject of adaptation and appropriateness of fences as enclosures, or give some examples that will tend to remedy the evils above suggested. J. *Oneida Co.*



Rotary Cultivator.

This new and improved implement, of which the above is a representation, is designed to prevent the impediments that usually attend any and every article heretofore employed in the culture of most kinds of soil. Its construction being such that the edges of the implement, which are ever acting upon the soil, always present a front free from the incumbrance that is usually met where it is stiff and unyielding. Its action is brisk and forcible, by a process which is altogether new, though simple and complete. It needs but a glance to discover, that all that is wanted to make cultivation easy, is here acquired. The proprietor of the above article, whose priority of claim to the invention is about to be secured by letters patent, would hereby give notice to the public, that an opportunity will soon be offered to test the utility and convenience of this machine as specified above.

For a full understanding of the above cut, let the wheel be u nderstood as acting like the wheel of a common wheel-barrow, and causing, by means of the chord the cylinder to revolve. The shafts are thereby put in a semi-opposite motion, causing the circular plates of iron to act in a corresponding motion, and in a two fold manner upon the soil. In this manner the nummerous difficulties attending other implements are overcome, and much labor is saved. T. J. TUTHILL.
Elmira, N. Y., Dec., 1847.

Bones for Manure.

Dissolving bones in sulphuric acid has been latterly practiced in England, and is considered a preferable mode to applying them in a broken or crushed state. But Prof. WAY, in a late lecture on the growth and culture of turneps, states that he prefers muriatic to sulphuric acid for several reasons; though he thinks we may combine the benefits of both plans by the use of salt in addition to that of bones or sulphuric acid. He directs—to two bushels of bone-dust, covered with 15 or 20 gallons of water, half cwt. of common salt to be added. When the salt is well mixed and dissolved, half cwt. of the oil of vitrol (sulphuric acid) is poured upon the mixture. In these circumstances muriatic acid is produced which dissolves the bones. This compound is said to have a great attraction for water, and will be found to collect the moisture of the atmosphere, and keep the earth moist, even in severe drouth.

NOTICES OF NEW PUBLICATIONS.

THE ROSE: its History, Poetry, Culture, and Classification. By S. B PARSONS. Published by Wiley & Putnam, New-York.

The author of this work is one of the proprietors of the celebrated Commercial Garden at Flushing. In this volume, which embraces nearly three hundred pages, large octavo, Mr. PARSONS has given whatever is known relating to the origin, history and uses of the rose, from the earliest times. In the preface, he informs us that it has been an especial object "to throw around the culture of the rose, a halo of pleasant thoughts and associations," and this we think he has eminently succeeded in doing. He has given the fullest directions, accompanied by neat illustrations, in regard to the propagation of the rose, and its general management, treatment of its diseases, a notice of its medicinal properties, its early history, and its *poetry*. He has given minute descriptions of the most esteemed species and varieties. The directions for culture comprise the results of his own experience, which, as those who have seen the rich and extensive collection of roses in the garden of Messrs. PARSONS will admit, has been highly successful. The work is executed in a beautiful style, and deserves to be in the hands of every amateur in rose culture.

TRANSACTIONS OF THE MASSACHUSETTS HORTICULTURAL SOCIETY.

We have received the first number of this work, which is hereafter to be issued regularly. It is executed, generally, in a style worthy the distinguished society from which it emanates. This number contains a valuable article on the "Character, History, and Culture of the Pear," by Gen. H. A. S. DEARBORN, and also a very valuable and important communication on the "Superiority of native varieties of Fruit," by A. J. DOWNING, Esq. There are five Chromolithed plates, viz: the two new Camellias raised by M. P. WILDER, Esq., the President of the Society—the Van Mons Leon Le Clerc Pear—the Williams Apple, and the Baldwin Apple—all of them accompanied with full descriptions of the articles they are intended to represent. The plates of the fruits, however, do not exhibit the peculiar characteristics of the varieties in so perfect a manner as could be wished; and the committee of publication say, that "after infinite trouble and disappointment," they "feel satisfied that the process of Chromolithing, in its present state, is not adapted for a work of the character which it is determined to stamp on the Transactions of the Massachusetts Horticultural Society;" and they have, therefore, "resolved not only that the plates of the future numbers shall appear in a very different style, but that, if possible, those of the first number shall be reproduced in a uniform manner." The typographical execution of the work is not surpassed by anything we have seen.

DOMESTIC ANIMALS: History and Description of the Horse, Mule, Cattle, Sheep, Swine, Poultry, and Farm-Dogs; with Directions for their Management, Breeding, Crossing, Rearing, Feeding, and Preparation for a Profitable Market: Also, their Diseases and Remedies, together with full Directions for the Management of the Dairy. By R. L. ALLEN. Published by C. M. SAXTON, New-York.

This work, with some important additions, constitutes a small part of the "Compend of American Agriculture," a volume by the same author. It will be found a convenient and useful manual. Mr. ALLEN is a sensible and intelligent writer, and he has embodied a large amount of valuable information in the little work before us. The subject matter seems generally to have been derived from his own experience and observation, and the style of expression is plain and comprehensive. [See advertisement.]

DOWNING'S NEW WORK.—Messrs. Wiley and Putnam have just issued a new edition of Mr. DOWNING'S "*Fruits and Fruit Trees of America*," with *seventy Plates of colored Fruits*, forming the most beautiful as well as the most valuable volume which has been issued from the American press on this subject—price $15.

MEDICO-CHIRURGICAL REVIEW.—This excellent work is hereafter to be united with "FORBES' BRITISH & FOREIGN MEDICAL REVIEW"—the title of the combined work to be "THE BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW."

The republication of the Medico-Chirurgical Review, has for more than twenty years been conducted by Messrs. G. R. & S. WOOD, of New-York. The reputation of the work has always been of the highest character, both in Great Britain and this country. The publication with which it is now united, has also been of long standing, and has sustained a high rank with the medical faculty. It is confidently expected, therefore, that an union of the two works, aided by the contributors which have formerly supported them, will result in the production of the best medical journal extant.

We are informed that several pages of "Addenda," forming a "Quarterly Retrospect of American Practical Medicine and Surgery," will be attached to each number of the republished work, and that no charge will be made for the addition, to all subscribers who pay in advance.

We presume the new work, like its predecessor, the Medico-Chirurgical Review, of which we have frequently spoken in terms of high commendation, will be eminently deserving support, and we cannot doubt it will be liberally bestowed. Published Quarterly, by G. R. & S. WOOD, New-York—$5 per annum in advance. [See advertisement, p. 39, of this number.]

GRAHAM'S AMERICAN MONTHLY MAGAZINE.—This monthly for January is already on our table, rich in engravings and matter. It has three beautiful steel plates, one of which is a portrait of Gen. Wm. O. Butler, of Kentucky—with a biographical notice by F. P. Blair, Esq. Among the other contributors to this number, which contains 24 extra pages, are Messrs. Cooper, Fay, Willis, Simms, Herbert, Roe, Paulding, Chandler, Bryant, Mrs. Sigourney, Mrs. Ward, and several others well known to fame.

GODEY'S LADY'S BOOK for January, with its beautiful embellishments, and 24 pages of extra matter, has already appeared. The engraved title-page is worth the price of the number, to say nothing of the other illustrations. Among the contributors to this number, are Mrs. Kirkland, Mrs. Ellott, Mrs. Hale, Miss Leslie, Grace Greenwood, Arthur Taylor, Weld, and others. [See advertisement.]

FARMER AND MECHANIC, a weekly publication, devoted to Agriculture, Mechanics, Science and the Arts. It is a spirited work, and furnishes much information on the subject, to which it is devoted. In mechanics it furnishes many illustrations of new machines, notices new inventions, and we should think would be highly useful to persons engaged in mechanical employments. Its terms are two dollars a year, *in advance*. W. H. STARR, editor and proprietor, New-York.

Answers to Inquiries.

Chinese Geese.—J. C. N. A., Richfield Springs. Chinese Geese can be had in this vicinity at $5 per pair. We cannot tell how much weight in feathers a pair will produce in a year. They are not large, but the feathers are thickly set, and appear to be finer than those of common geese. They readily breed with any of the domestic kinds.

Carrots.—"A Subscriber," Frederick, Md. Carrots are usually fed raw to horses and cattle. They are sometimes fed to hogs, but do not seem to be as valuable for them as for some other kinds of stock. Directions in regard to their culture may be found in the Cultivator, vol. 2, new series, page 154, and in vol. 3, p. 159.

Pea-Nut, (*Arcahis hypogæa,*) or **Ground Pea.**—P. N. Norristown, Pa. This article is considerably cultivated in some of our southern states under the name of *pindars*. The seed is planted in rows five feet apart, and a foot apart in the row, as early in spring as the weather and the state of the soil will admit. They are dug in the fall before hard frost. The tops dried, make good fodder for horses and cattle. It is said that the poorest land in Mississippi will produce from fifty to eighty bushels of peanuts per acre. The only cultivation needed is to keep the ground clean.

Preservation of Cabbages.—F. G. R., Shadwell, Va. In a climate as mild as that of your section, we should suppose the best way of preserving cabbages through the winter, would be to place them in long piles or winrows, and cover them with straw or corn-stalks. A layer of earth in addition may be needed in the coldest weather. They are easily taken for use as they may be wanted, by beginning at one end and continuing to take them till the pile is finished.

Guano.—P. R. B., Cattawissa, Pa. Two hundred pounds of guano is the quantity usually recommended for an acre. It should be previously mixed with about four times its bulk of finely pulverized earth—sand will be most convenient for the purpose—and it may be spread broadcast on the surface of the ground immediately before putting in the seed. It is sometimes applied to gardens in a liquid state. Four pounds of guano are put to twelve gallons of water, and after it has stood twenty-four hours, it is applied to the ground by a watering apparatus.

Converting Corn-Stalks into Manure.—P. H. A., Baltimore Co., Md. The best way of "converting dry corn-stalks into manure, *speedily*," with which we are acquainted, is to pass them first through a strong cutting machine, calculated for the purpose, and then place them in a heap with manure, or muck, and saturate it with urine. The urine may be saved by conveying it from the stalls where the animals are kept, to tanks, or temporary hollows, from which it may readily be taken to the heap. Fermentation will take place in a short time.

Price of Wood in Paris.—An American in Paris says, that so high is the price of wood in Paris, in consequence of the forests having been mostly consumed, and the high duty on English coal, that it is usually sold by the pound—and that the dealers keep it locked up in-doors, "lest while the wood-merchant was looking one way, some scoundrel might fill his pockets, and be off!"

Prices of Grapes.—P. Barry says that the common market price of the best exotic grapes, raised in houses at Boston, is 75 cents to $1 per lb.

New-York State Ag. Society.

The annual meeting of the Society will be held on the 3d *Wednesday* (*19th*) *of January at the Capitol.* On Wednesday evening an address will be delivered by Prof. J. P. Norton of Yale College. On Thursday evening, an address by the President, George Vail, Esq. The reports of Committees and awards of premiums will be made on Thursday morning at the agricultural rooms. B. P. Johnson, *Sec'y.*

COMMITTEES APPOINTED FOR WINTER MEETING.

☞ Their attendance is desired as early as Tuesday morning the 18th of January.

Management of Farms.—J. Stanton Gould, Columbia, and A. Van Bergen, Greene.

Stall feeding Cattle, and fattening with Indian Corn.—S. Howard, Albany, and Henry Wager, Oneida.

Draining and Top Dressing.—J. P. Beekman, Columbia, and A. Ayrault, Livingston.

Designs for Farm Buildings.—Wm. Buel, Monroe; B. N. Huntington, Oneida, and J. McD. McIntyre.

Cheese Dairies.—B. P. Johnson, Oneida, and Thos. Burch, Herkimer.

Butter Dairies.—R. Denniston, Orange, and J. Carey, Albany.

Wheat and Indian Corn.—George Geddes, Onondaga, and L. C. Ball, Rensselaer.

Barley, Rye, Oats, Peas, and Beans.—E. Comstock, Oneida, and W. P. Coons, Rensselaer.

Potatoes, Ruta Bagas, &c.—E. P. Prentice, Albany, and Martin Springer, Rensselaer.

Corn Fodder, Hay, Hops, &c.—Benj. Enos, Madison, and Seth Hastings, Rensselaer.

Experiments, Soiling, and Manures.—Prof. E. Emmons, Albany, and Joseph Daniels, Saratoga.

Management of Sheep.—M. Y. Tilden, Columbia, J. McDonald, Washington.

Fruit.—L. F. Allen, Sam'l Young, H. Wendell, A. J. Downing, and J. W. Bissell.

Live Stock in Vermont.—Vermont will probably always be a stock and wool-growing state. Her hills and vales, and the thousand cool and refreshing rivulets that empty themselves from the one to the other, has destined it for a grazing country. In 1840, she had more horses and more neat cattle than any of the New-England States; her number of sheep was nearly equal to the whole of those states combined. She cut more hay and produced more oats than either. The value of her dairy products was but a trifle below that of Massachusetts, and it would have exceeded that even, were it not on account of our distance from market. She stands next to the great state of New-York in her quantity of wool, and her quantity to each individual is about double that of the last mentioned state. —*Richardson's Address.*

Effects of Famine.—The village of South Reen, in the west part of the county of Cork, says the Southern Reporter, contained in the early part of the year 62 houses, and 320 inhabitants. It now has but 50 inhabitants, and 8 small hovels remaining, the rest of the houses having been broken up to furnish coffins for the dead and fuel for the living.

Potato Crop in Ireland.—It is estimated that, until the present year, the potato crop in Ireland has occupied two million acres—the present year it is estimated that only *one-fourth* the usual quantity has been planted, the remaining three-fourths having been planted with other crops, or remaining uncultivated.

To save Horses from Fire.—The difficulty of getting horses from burning stables is well known, to remedy which, *blind-fold* them perfectly, and by gentle usage they may easily be led out.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from A Vinedresser, J. C. N. A., P. N., R. W., F. Holbrook, Prof. J. P. Norton, H., A Horticulturist, B., Cheap Comfort, Erastus W. Ellsworth, S. W. Jewett, T. J. Tuthill, H. A. Parsons, J., N. B. V., A Manual Laborer, David Thomas, X., S. Atherton, W. R. Peck, J. G. C.

Books, Pamphlets, &c., have been received since our last, as follows:—*Address of Ira S. Hitchcock, Esq.*, President of the Oneida Ag. Society, together with the Reports of Committees, &c., of the Society, from Jas. Rees, Rec. Secretary.——*Oswego Beurré Pears*, from J. F. Allen, Esq., Oswego.——*The Rose*, its History, Poetry, Culture and Classification, by S. B. Parsons, from the publishers, Wiley & Putnam, New-York.——*Catalogue of New Works*, published by Wiley & Putnam, New-York.——*Horticultural Report* of the American Institute for 1847, by Thomas Bridgman. *Mr. Payson's Address* before the Essex (Mass.) Ag. Society.——*Transactions of the Mass. Hort. Society*, No. I.——*Address of B. P. Johnson*, before Greene co. Ag. Society, with account of Fair, &c.——*Morning Star* for the New Jerusalem Church, containing the Essentials of all the Scriptures or Word; being thus a Guide for Man in all his Duty to himself, his fellow man and neighbor. By James Cramer Ott. Baltimore: Sherwood & Co.——*Report on Farms*, by the committee of the Talbot Co. (Md.,) Ag. Society.——*Domestic Animals:* their History, Description, Management and Diseases. By R. L. Allen. New-York: C. M. Saxton.——*Catalogue of Astoria Nursery*, by L. Prevost.——*Introductory Lecture* on the relations of Chemistry to the Vital Force, by D. P. Gardner, M. D., Prof. of Chemistry, &c., in the Philadelphia College of Medicine.

New Illustrations—The portrait and memoir of Judge Buel, given in our present number, we design as the commencement of a series of similar illustrations and articles. Many individuals have been distinguished for the exertions they have made in the improvement of the agriculture of the country; and we believe that a proper record and exhibition of these examples, cannot fail to exert a salutary influence on society. We have, therefore adopted means for procuring materials which will enable us to furnish portraits and biographical sketches of several gentlemen, which we think will add greatly to the interest as well as value of our columns, and will, we have no doubt, be duly estimated by our readers.

☞ An article on Massachusetts Farming, which was prepared for this number, is unavoidable deferred to our next.

Will some of our readers inform us whether the black-berry is cultivated?—stating the mode of cultivation, and the success in the production of fruit.

Erratum.—In "*Notes of a Traveller in England and Wales,*" in our December number, for "Ouns Head," read Orms Head.

Samples of Wool.—We have received from James M. Trimble, Esq., of Hillsborough, Ohio, some samples of wool from his flock of sheep. The samples are not of uniform quality, but some of them are nearly equal in fineness to the best Saxon in the country.

Large Hog.—Mr. Jennings, provision dealer of this city, purchased a full blood Berkshire hog, two years old, which weighed, dressed, 720 lbs., from Mr. Samuel Shaw, of Berlin, in this county.

Fine Cattle.—A pair of extraordinary oxen, raised by Allen Ayrault, Esq., of Geneseo, passed through this city on their way to Boston in November last. They tarried here a few days, and we had an opportunity of seeing them. They are twins, nearly full-blood Durhams, and though but six years old, were geatly superior in size and fatness to any cattle we have before seen. In symmetry and "*quality,*" (as the English butchers say,) they were also remarkably fine; one of them in particular, the darkest colored one, we think decidedly the *best* ox we ever saw—he had a larger proportion of high-priced meat, compared with the inferior portions and offal, than any other animal of his species that we have met with. We intended to have had the dimensions of this ox taken accurately, that they might have been compared with the celebrated "English Durham ox," bred by Chas. Colling, but he left here before we had an opportunity. It was the opinion of our best judges, several of whom have been acquainted with the best cattle in Great Britain, that these oxen would compare favorably with any of the prize animals in that country. We did not learn the exact live weight of these cattle. When they are slaughtered, we would thank some one to forward us an accurate account of their weight.

Fuel.—If the farmer has not already obtained a year's supply of wood, he should endeavor to procure it before the snow gets deep. Wood can be cut to the best advantage when the ground is bare, or only covered with a few inches of snow. The trees can then be cut low, the limbs readily trimmed up, and all the wood saved. It should be piled in the woods till it is convenient to convey it to the house or to market. The most convenient mode of carrying is by sleds, and the first favorable snow should be taken for this purpose. Before the first of April it should be sawed, (not cut up with an axe,) and every stick that is more than two inches through, should be split, and it should be placed under cover to season. Wood thus managed is much better than that which remains in the woods till the bark rots off, to say nothing of the extra comfort and satisfaction to be enjoyed by it.

Seedling Apple.—Mr. C. E. Boardman, of Cario, Greene County, N. Y., has left us a specimen of an apple said to have been raised from seed in his neighborhood. We think it highly deserving of notice. It is of rather large size, and in color resembles the Maiden's Blush. Its flavor is good. Ripens from November to January.

☞ Mr. Peter Van Ness, has left us two samples of apples, the names of which he wishes to learn. One of them is an excellent kind, somewhat resembling the Fall Pippin, but a much later keeper. We will endeavor to ascertain its name. We have also received from Rodman Sisson, Esq., of Abington, Susquehannah Co., Pa., some very handsome specimens of the Greening, Belleflower, Jilleflower, and one or two varieties unknown to us.

☞ We are informed that the horse Gifford Morgan, lately owned by Mr. F. A. Wier, has been sold to a company, the members of which reside in Vermont and New Hampshire, for two thousand dollars. He was placed in shares of one hundred dollars each, his former owner, Mr. Wier, retaining one share. We learn that this company, or some of the members of it, own several mares of the highest existing Morgan blood, which have been bred, and are in future to be bred, to the above horse. This arrangement, with other efforts which are being made, will ensure the perpetuation of this valuable stock, which would otherwise have been lost beyond recovery in the course of a few years. The old horse, though coming *two-and-twenty*, is still vigorous, and capable, with good usage, of much service.

The "Phœnix Stock" of Cattle.—In our notes on Massachusetts farming, we had occasion to mention some cattle called the "*Phœnix Stock.*" We saw some of this stock on the farms of B. B. Belcher, Springfield, Pliny Chapin, and Chester W. Chapin, of Chickopee, and in other places. The resemblance among them is very striking—not only the half-bloods, but those of a quarter-blood, and even less, exhibiting the family traits so plainly that it was easy to distinguish them from other animals in the herds. Their leading points are a lean head, with horns of medium length; prominent eye; long neck, rather small at the junction of the head; a straight back; moderately round body; deep hind quarters; clean, flat legs; color generally yellowish dun, with brindled streaks. Nearly all of them are good handlers, and they are generally excellent for the dairy.

On inquiring the origin of this stock, we were told that it was derived from a bull introduced by the Rev. Mr. Phœnix, late of Chickopee, (now of New Haven,) in 1835 or '36. Mr. Lathrop, of South Hadley, informed us that he had taken some pains to ascertain his blood. Mr. L. found that he came from a cow owned by Judge Ingraham, of New-York. She was imported, and was called a "Durham cow." The bull was dropped on the passage from England, or soon after the cow arrived in this country. This was all which could be told of the bull's pedigree. He was spotted, white, with large patches of brindled-yellow. He was small and poor when brought to Massachusetts, but after a year or two grew well, and became a mediumed-sized animal. It has been *conjectured*, from the color and quality of the stock, that he was a mixture of Short Horn and Alderney blood.

At the Hartford show we saw a superior cow, belonging to Mr. Jas. H. Charlton, of East Windsor, which we were told was of this stock. Mr. C. stated that 28 lbs., 1 oz. of butter were produced from her milk in two weeks, in June, 1847, and that from the 12th to the 22d of June, the weight of her milk averaged 57 lbs. per day—her keeping grass only.

We suggest that efforts be made to preserve this stock. Let the best of the cows be put to bulls which will be likely to preserve in their progeny the valuable qualities for which the family is distinguished.

Adulterated Wines.—A correspondent in Dutchess county says:—"The article on wines in the December number of the Cultivator, reminds me of a fact that came to my knowledge in Paris. A physician attending lectures in Paris, told me that he analysed a bottle of the lowest priced wine there, (Paris)—the *Vin Ordinarie of laborers, &c.*, and found that it contained a quantity of the *Sugar of Lead.*"

Sales of Stock.—We noticed last month some fine cattle and sheep from Lewis F. Allen, Esq., of Buffalo, destined for E. K. Brown, Esq., of Mississippi. There was a yearling Durham bull, and two Devon heifers—the latter two years old. The sheep were a pair each of Cotswolds and South Downs. Having been several days on their journey under unfavorable circumstances, they did not, of course, appear to that advantage they would have done in their own stables or yards; but should they succeed in reaching their destination without material injury, we presume, from their good points, they will prove creditable to their breeder, and to the breeds to which they belong.

C. N. Bement, Esq., of this city, has lately disposed of some stock to Dr. J. N. Langdon, of Kennebunk, Port, Maine. The stock consisted of a bull calf and a yearling heifer, a cross of the Ayrshire and Durham. They were very pretty animals, and we presume will make good dairy stock.

Cultivation of Onions.—Mr. H. W. S. Cleveland, of Burlington, N. J., requests that some of our Eastern correspondents would give, through the Cultivator, an account of their mode of raising onions as a field crop. He wishes to know "what kind of soil is best, how it is prepared, what is the after-culture, and the best time and mode of harvesting and preparing for market, and what is considered a fair yield per acre?" He asks, also, whether a natural growth of wild garlic is any evidence that the soil is fitted for onions? We presume many of our subscribers could reply to these queries, and we should be glad to hear from them.

Exhibition of the Provincial Agricultural Association of Upper Canada.—This Society held a splendid exhibition at Hamilton, on the 7th of October last. The weather was very unfavorable, but there was notwithstanding a vast crowd of people in attendance, and the display of stock, implements, fruits, &c., appears to have been very extensive. We rejoice at the improvement which is evidently going on in the agriculture of the Canadas. The government and leading individuals seem to be warmly engaged in the cause. We are informed that there are already in Western or Upper Canada, upwards of one hundred agricultural societies, and with these means, and the fertile soil and ready markets which the farmers of that section possess, we cannot doubt that they will shortly become eminently prosperous.

Preventing the Potato Rot.—An intelligent farmer on a small scale, has tried a remedy for several years, which, though not new, has been attended with such uniform success, as to deserve mentioning. He cultivates the Mercer, a variety well known to be unusually liable to the rot. The crop is planted *very early*, almost as soon as the snow disappears in spring, so that the potatoes are fully matured by the end of summer. In the latter part of the eighth month (Aug.) the potatoes are dug, and immediately housed in as dry and cool a place as possible. By this means he has never lost a bushel, although his neighbors, who live close at hand on either side, and who plant and harvest their crops later, have suffered abundantly.

The Apple Crop.—The inequality of the apple crop in different regions the past season, is remarkable. In central Ohio, in the valley of the Hudson, and on the seaboard, this fruit has been more or less cut off; while in a large part of western New-York, it has not been so great for several years. A correspondent on Long Island states that in an orchard of twelve acres, he did not obtain half a bushel. Another correspondent in East Greenwich, gives the following account of the singular circumstances attending its destruction in that part of Rhode Island:—"We had the most meagre prospect of apples I have known for years, and the Rose bugs in myriads attacked the scattering fruits while not larger than a nut, and from ten to twenty might be seen upon a single fruit. Nothing equal to it was ever seen in this region; the destruction is long on the seaboard; and fortunately a west wind blew them into the sea in such quantities, that they literally formed a winrow on shore for miles, and a wagon load might have been collected in a short time on some parts, as I have been informed repeatedly."

Science and Practice in Farming.—B. P. Johnson, Esq., in his address before the Greene County Agricultural Society, makes the following just observations in regard to combining science and practice in agriculture:—"The man who in his study theorizes about farming, and never has had his theories tested in the field, is not the man we need. But where practice and theory are combined and carried out by the *practical farmer* on his farm, we cannot fail eventually to receive great advantages. I would urge, therefore, upon farmers, to give the results of their labors through the agricultural press, and thus contribute to the dissemination of facts which will benefit others, and may lead to the most auspicious results."

MEASURING HAY.—The Mass. Ploughman says that 600 cubic feet of hay are usually sold for a ton, if well packed—equal to a mass ten feet square and six feet high. But in deep bays, 500, and even 400 in some extreme cases, will make a ton. A farmer who has a bay 20 by 30 feet, and 15 feet high, may therefore reckon upon having about 15 tons of hay; the amount will of course vary with the kind of hay. A little measuring and subsequent weighing would soon enable any farmer to determine with considerable accuracy the quantity of hay he may have on hand, and make his calculations accordingly.

WHEAT IN NORTHERN ENGLAND.—A correspondent of the Genesse Farmer, now in England, says that the soil between Carlisle and Newcastle, does not appear to be superior to that of Monroe county, N. Y., yet thirty bushels of wheat per acre is a very common yield, often forty, and sometimes fifty. Although this fine product is largely attributable to good farming, he thinks it is in some degree owing to the coolness of the climate favoring more perfectly the ripening and filling of the heads.

WHEAT AND CHESS.—Wm. Powers, of Youngstown, Ohio, gives the following experiment in the Ohio Cultivator:—He was about sowing his wheat, believing it to be *perfectly clean;* but, on being advised, concluded to brine and lime it first. When the brine was poured on, to his surprise he found chess floating thickly on the surface, and on being skimmed off, about a pint and a half were obtained from each bushel of seed. This would thoroughly seed any ground; but if the wheat grew well, the chess would be kept small and hidden; where winter killed, it would spring up, spread out, and occupy the whole ground, and be attributed by superficial observers, to the change of the killed wheat to chess. The wheat, however, was thoroughly cleaned by brining, so that where it was winter killed and fly-eaten, no chess appeared.

IRRIGATION IN CHINA.—In cultivating *rice*, the sloping land is formed into terraces, and a stream is conducted upon the upper terrace, and from that to each successive one below, thus flooding the whole surface to the depth of several inches, or sufficient for the rice. As soon as the crop assumes a ripening hue, the water is readily turned off from any of the terraces.

WINTER FEEDING CATTLE.—Wm. Wallis, an intelligent correspondent of the Ohio Cultivator, states a great improvement in the winter feeding of cattle, which consists in *warming* the food by fermentation. This is effected in large wooden boxes or vats, holding about a hundred bushels each. Sliced roots, chaff, cut straw and hay, &c., moistened with water, are jammed, and covered tight. In three days they are fed out, three times a day. Three boxes keep up a regular succession of this heated food. Cattle are fond of it, and thrive finely.

FERTILITY OF SUBSOIL.—It sometimes happens that the subsoil contains very enriching ingredients, and becomes of great value when brought to the surface. H. N. Gillett, in the Ohio Cultivator, states that on the farm of James Kelly, Lawrence county, Ohio, land obtained in digging a well, was planted with corn, and gave an extraordinary product, some of the ears being *twenty-two inches* in length. Experiments on a small scale, by trench-plowing, are easily tried on every farm; and in many cases they would lead to highly important and valuable results.

DRAUGHT IN PLOWING.—A correspondent of the Farmer's Cabinet, very justly observes that farmers often commit a great error, in shortening the draught too much under the supposition that they lighten the exertion of the team. They may do so, with a cart or sled, the load being in part transferred to the horse's backs. But in plowing, "the plow must be *set* so as to *swim*, without any tendency to rise or sink;" this important object being attained, the length of chain is immaterial.

APPLES TO CHINA.—R. L. Pell, of Ulster, has shipped a hundred barrels of Newtown pippins to China; the first shipment of apples made to that country.

GREEN AND DRY FODDER.—Boussingault has come to the conclusion, from actual and carefully conducted experiments in feeding cattle, that a given quantity of fodder, whether green or dry, contains the same amount of nutriment; that is, an acre of hay will go as far in feeding, if fed dry, as it would if fed immediately after cutting.

PARING APPLES.—The N. Y. Farmer and Mechanic says that an improved machine for paring apples has been patented by Bullock and Benson of New-York, which will "perfectly take off the skin of an apple, in the neatest manner, in about one second, and continue to work at this rate as fast as the apples can be taken off and put on. It is quite simple in construction. The price two and a half to three dollars."

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Dec. 22, 1847.

FLOUR—Genesee per bbl. $6.31¼a$6.50—Ohio and Michigan $6.12½a$6.25—Buckwheat flour, $2 per 100 lbs.

GRAIN.—Wheat, Western. per bu., $1.40—Corn, northern, 71a 74c.—Rye, 87c.—Oats, 49a50c.—Barley 80c.

BUTTER—Orange County, per lb., 19a21c.—Western, dairy, 11a16 cents.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $8.50a$8.75.—Prime $5a$5.50.

PORK—Mess, per bbl., $12—Prime, $8.

HAMS—Smoked, per lb.,

LARD—Per lb. 8a8½c.

HEMP—Russia clean, per ton, $230.

HOPS—First sort, per lb., 6a8c.

COTTON—New Orleans and Alabama, per lb., 6¼a8¾c.—Upland and Florida, 6¼a8½c.

WOOL—(Boston prices,) Dec. 22.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,....................	40a45	"
" three-fourths blood fleeces,.........	35a38	"
" half blood do	32a35	"
" one-fourth blood and common,.....	28a30	"

LIVE-STOCK Market—Brighton, Mass., Dec. 20.

At market, 550 Beef Cattle, 100 stores, 21 yokes of Working Oxen, 25 Cows and Calves, 2,800 Sheep and Lambs, and 600 Swine.

In consequence of the small number of Cattle, prices advanced a trifle from our last quotations.

Prices—Beef Cattle: We quote extra $6 75; first quality $6a 6.50; second quality $5.25a5.75; third quality $4a4.75.

Sheep and Lambs: Sales of lots at from $1.33 to 2.36.

Swine: Lots to pedule at 4½ for Sows, and 5 3-8 for Barrows; at retail 5½a7c.

THE LADY'S DOLLAR NEWSPAPER,

CONTAINING articles from the best writers of England and America, and translations from other languages. Also, all the

English Annuals Entire,

which cost in this city from $5 to $10 each. An Annual will be published in one number, which will cost about four cents to the subscribers of the Lady's Dollar Newspaper.

In addition to the above, the paper will contain Tales, Poetry, Essays, Feminine Accomplishments, Useful Receipts for the Toilet, (from a work which has been imported expressly,) Fashions. Health, Fancy Work, Housekeeping, Domestic and Fancy Cookery, from Soyer's great book, just published.

It will be seen that the subscribers to this work will receive twice a week for one dollar, that which in any other shape would cost them from $3 to $6.

TERMS.

Single copy one year in advance, $1; six copies, $5; thirteen copies, $10.

A copy of either work sent as a specimen gratis to any person who will pay the postage on the letter requesting it. Address

L. A. GODEY,

Jan. 1—2t. 113 Chestnut-st., Philadelphia.

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Jan. 1, 1848.

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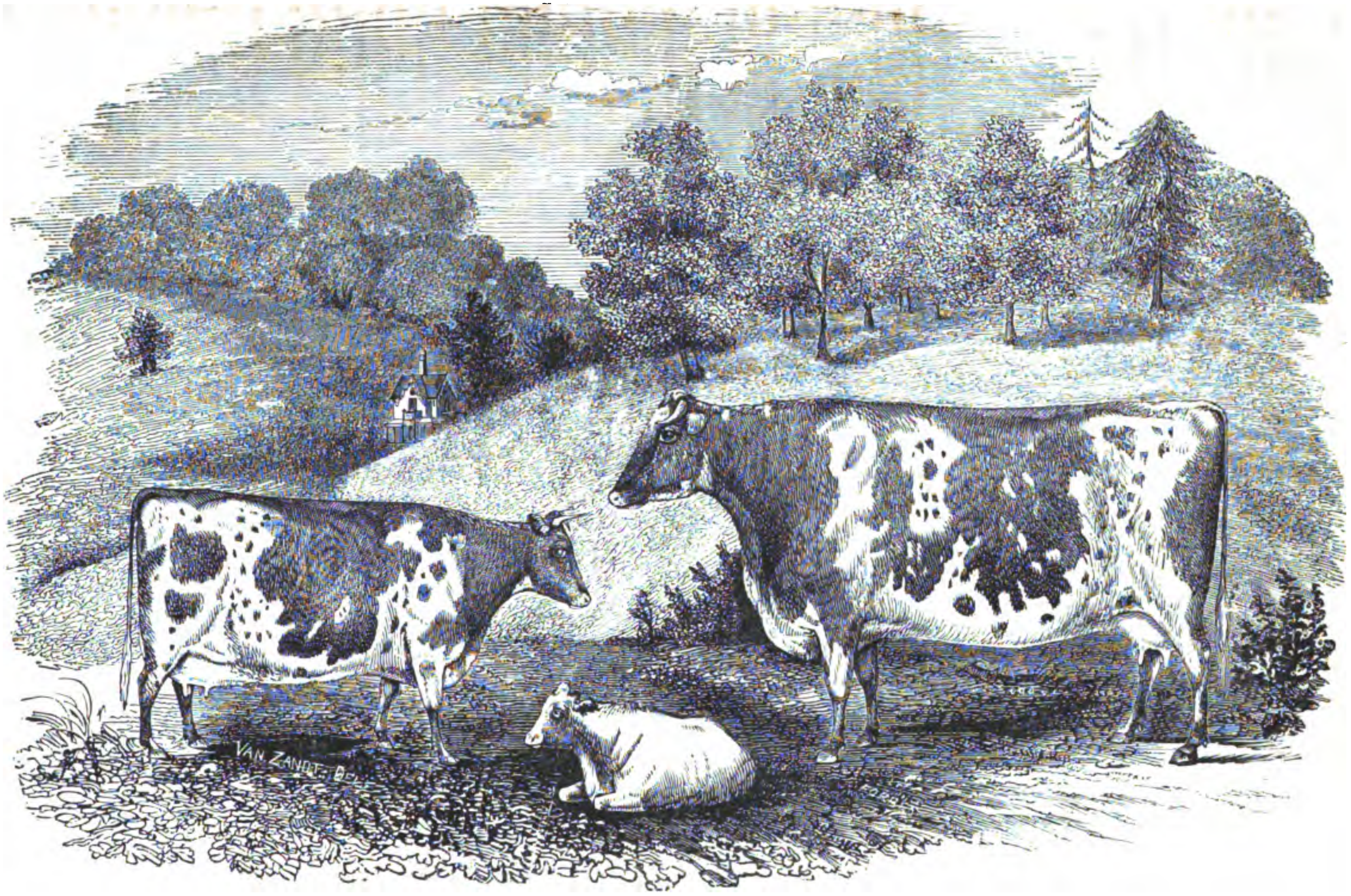

AYRSHIRE AND DURHAM COWS,

The property of E. P. Prentice, Esq., Mount Hope.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, FEBRUARY, 1848. No. 2.

OUR PLATE—AYRSHIRE CATTLE.

THE principal design of our plate, is to furnish a portrait of the imported Ayrshire cow *Ayr*, (on the left,) but in order to convey an idea of her size, her figure is accompanied by that of a medium-sized Durham cow, *Charlotte*—the proportions corresponding to the relative size of the animals; both of which are the property of E. P. PRENTICE, Esq., of Mount Hope, near Albany.

Ayr, whose likeness has been very accurately delineated by Mr. VAN ZANDT, is nine years old, and was imported in 1842. She is nearly a model of what, in our opinion, a *dairy cow* should be, and on this account we deem it proper to give a tolerably full description of her. She possesses in a high degree the excellent milking properties which distinguish the best of the breed to which she belongs, united to a more perfect symmetry than we have ever seen in any other Ayrshire, and which we have seldom, if ever, known equalled in *any* breed. Her body, (as will be seen by a comparison of the figures,) is small; but her frame or bone is proportionately less. The head is small, the face dished, the forehead broad, and the eye prominent. The neck is small at the junction of the head, but pretty deep and full at its connection with the body. The back is straight, the crops fine, the ribs round, the loins broad, the flanks deep, the udder capacious, (spreading wide on the body, but not hanging low,) and the milk-veins large and prominent. The legs are small, but strong, hard and sinewy, like those of a deer. The great depth and length of the hind quarters might, from a profile view, give the idea that the chest was too light; but though the hind quarters are proportionately heaviest, (as we prefer to have them in a milch cow.) there is no deficiency in the fore end. The sternum (or breast-bone) is wide, the fore legs stand wide apart, the bosom is full, and the first ribs are particularly full and wide-spread at their junction with the sternum, giving a chest of great capacity for an animal of her size.

As her form and general appearance indicate, she is healthy and hardy. Her skin is of a yellowish hue, mellow and elastic; and though she does not possess the fattening quality in an *excessive* degree, or to an extent that would interfere with her dairy qualities. she thrives very rapidly when not giving milk. The quantity of milk she affords is, in proportion to her size, quite extraordinary. She has given, when on grass-feed only, upwards of twenty quarts (by actual measure) per day, and she continues in milk till near calving. No particular experiments have been made with her in regard to butter, but her milk has been ascertained to produce a large proportion of the richest cream.

Her offspring are much like herself. She has had four calves since she left Scotland. The first, a heifer, was dropped on ship-board during the passage; the next, a very fine bull, is now owned by Mr. J. W. HOWES, of Montpelier, Vt.; the next a bull, now nearly two years old, a very superior animal, inheriting in a remarkable degree the characters of the dam; and the next a heifer, equally as fine as her other progeny, now about two months old. The two last, together with three grand-daughters of *Ayr*, are still in Mr. PRENTICE's possession.

The origin of the modern Ayrshire breed of cattle, is a subject on which there has been some controversy. YOUATT says there was no such breed in Scotland a century ago. It is evidently an artificial variety, but, as Prof. Low observes, "authentic records are wanting to show by what progressive steps it has been moulded into its present form." The same author states, however, that at the time he wrote, 1841, they had "spread over a large tract of country, and by continued mixture with one another," had "acquired such a community of characters, as to form a *distinct and well-defined breed*."

"Tradition," he observes, "refers to an importation of individuals of the Alderney breed to the parish of Dunlop, which became first distinguished for its cows and the produce of its dairy. This tradition is almost confirmed by the similarity existing between the Alderney breed and the modern Ayrshire, which is so great as to lead us, independently of tradition, to the conclusion, that the blood of the one has been largely mingled with that of the other."

The improved variety of Ayrshire, was long known by the name of the "Dunlop breed," and there is evidence that it was distinguished and sought after sixty years ago. We are informed that ROBERT BURNS, when he resided on a farm at Nithsdale, in Dumfrieshire, introduced this stock to that neighborhood. It was (or a part of it at least) presented to him by the proprietor of Dunlop House, whose lady, Mrs. DUNLOP, was a special friend and patron of the poet. In a letter dated Nov. 13, 1788, he speaks of a heifer which he had thus received as "the finest quey in Ayrshire."*

YOUATT refers to "*Rawlin's Cow-doctor*," published at Glasgow in 1794, in which, speaking of the cattle of Ayrshire, it is said:—"They have another breed, called the Dunlop cows, which are allowed to be the best race for yielding milk in Great Britain or Ireland, not only for large quantities, but also for richness and quality. It is said to be a mixture by bulls brought from the island of Alderney with their own cows." It appears also, from various accounts, that the Short-Horned or Tees-water cattle were introduced into Ayrshire at an early day. The Short Horns were frequently called the Dutch breed in former times, but it is mentioned that Holstien or Dutch cattle from the continent were also imported to Ayrshire.[*] Prof. Low concludes, therefore, that—"from all the evidence which, in the absence of authentic documents the case admits of, the dairy breed of Ayrshire owes the characteristics which distinguish it from the older race, to a mixture with the blood of the races of the continent, and of the dairy breed of Alderney."

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* Correspondence of Burns, Currie's edition—page 127.

Lawrence, who wrote in 1809, says:—"I apprehend this milky race [the improved Ayrshire] to be the result of crossing the cows of the country with Alderney bulls, the cows, perhaps, having previously a portion of Dutch blood."

Most authorities agree with the above in regard to the origin of the present Ayrshires. It is for dairy purposes that they are considered especially valuable, and in this respect are reckoned second to none in Great Britain. Their distinguishing characteristics are given by Low as follows:

"The modern Ayrshire may stand in the fifth or sixth class of British breeds with respect to size. The horns are small, and curving inward at the extremity, after the manner of the Alderney. The shoulders are light, and the loins very broad and deep, which is a conformation almost always accompanying the property of yielding abundant milk. The skin is moderately soft to the touch, and of an orange-yellow tinge about the eyes and udder. The prevailing color is a reddish brown, mixed more or less with white. The muzzle is usually dark, though it is often flesh-colored. The limbs are slender, the neck small, and the head free from coarseness. The muscles of the inner side of the thigh, technically called *the twist*, are thin, and the haunch frequently droops to the rump—a character which exists likewise in the Alderney breed, and which, although it impairs the symmetry of the animal, is not regarded as inconsistent with the faculty of secreting milk. The udder is moderately large without being flaccid. The cows are very docile and gentle, and hardy to the degree of being able to subsist on ordinary food. They give a large quantity of milk in proportion to their size and the food they consume, and the milk is of excellent quality. Healthy cows, on good pastures, give 800 to 900 gallons in the year, although taking into account the younger and less productive stock, 600 gallons may be regarded as a fair average for the low country, and somewhat less for a dairy-stock in the higher."

The Ayrshires which have been brought to this country have varied, somewhat, in character and qualities; but not more so, we think, than the Durhams or Short Horns. As with other breeds, all Ayrshires are not equally valuable, and some importers may have been unfortunate in their selections. We are not in possession of many experiments which have been made here with this breed. It has been said that in Mr. Cushing's trial of the Ayrshires at Watertown, Mass., they proved no better than the best "native" cows. Mr. C., however, purchased the very best cows which could be obtained to put on trial with the Ayrshires. We have never seen any account of the amount of milk yielded by the "natives;" but in Mr. Colman's Fourth Report on the Agriculture of Massachusetts, a statement is given in regard to the quantity given by the four Ayrshires for several months. The account for one of them is carried through a year, (the year 1837,) and it appears that she yielded 7,728 lbs., or 772 galls.—an average of eight quarts and a third per day through the year. Is there any evidence that any of his "natives" equalled this?

We are not aware that any account was kept of the amount of food consumed by Mr. Cushing's cows; but as the native cows were in general considerably largest, and not calculated from their form to live on less in proportion to their size than the Ayrshires, is it not fair to infer that the expense of keeping was in favor of the latter? And this circumstance might have rendered the *profit* of the Ayrshires greater than that of the natives, though they might not have afforded a larger quantity of milk.

But we know of one instance, where a bull from Mr. Cushing's herd, which was taken into one of our best grazing and dairy districts, has been the means of greatly improving the stock for dairy purposes. We allude to the Ayrshire bull owned by Mr. Chapman, of Middlebury, Vt.

The Massachusetts Society for promoting Agriculture have made several importations of Ayrshires. The first consisting of three cows and a bull in 1837. The last of four cows and a bull in 1845. The bull first imported was kept in different seasons in Berkshire, Hampshire, and Hampden counties, and the testimony of many persons with whom we have conversed in regard to the subject is, that the infusion of the Ayrshire blood from this bull, decidedly improved the dairy qualities of the stock in the various districts were he was kept.

Mr. Phinney found that an Ayrshire cow, (one of the three first imported by the Mass. Society in 1837,) put on trial with "the best native cow selected from a lot of twenty," made a pound and a half more butter in a week, than the "native"—both being fed alike.

Besides the importations of Ayrshires into Massachusetts, they have been introduced at various times into Connecticut, New-York, New Jersey, Maryland, and Virginia, and the accounts we hear are generally favorable to them as *milch cows*.

Our own conclusion is, from what we have seen of the various breeds of cattle, that if we wished to obtain a stock for the production of the greatest quantity of butter in proportion to the cost of keep or the food consumed, we should make one trial, at least, with a selection from the Ayrshires.

Are Showers increased by Forests?—The editor of the Southern Cultivator states that the size of streams and rivers is considerably diminished by the destruction of forests in clearing up new countries. He states as the reason, that it "is known greatly to lessen *the fall of rain* in the region thus treated!" What effect a growth of trees can have upon the rain clouds 2 or 3 miles above, as they are swept over the country by the winds, that would not be equally produced by a field of clover, or of corn, may be difficult to decide; would it not be more reasonable to attribute the diminution in streams to the evaporation of rains after they have fallen, in the open sunshine, or to their absorption by the cultivated mellow soil; which the hard earth and dense shade of forests would not so readily favor?

Waste of Manure.—The Farmers' Magazine states that it is a well ascertained fact, that in the single portion of Regent street, between the Quadrant and Oxford street, three loads of manure are dropt every day, or more than a thousand loads per annum; and the amount washed through the different sewers from the city of London into the Thames is 725 tons a year. Other cities, on the continent, by providing means for securing such waste, make the sale of manure from the cesspools a source of revenue.

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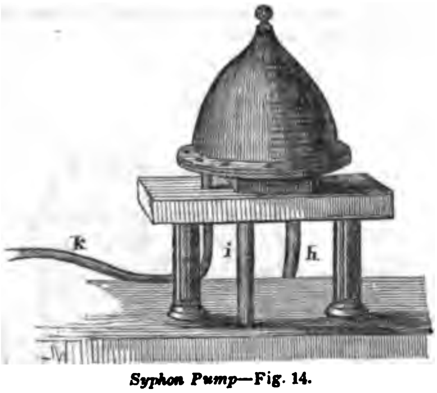
[*] Youatt's Treatise on British Cattle—page 130.

ELLSWORTH'S SYPHON PUMP OR RAM.

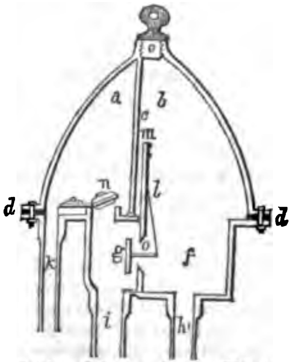
Editors of the Cultivator—Many of your subscribers who noticed, more than two years since, an article in the Cultivator, over my signature, giving some account of the successful performance of an apparatus for elevating water, by means of a syphon, will probably, at this late day, be more surprised to meet with the following description of it, than they were at the first announcement of such an invention. The thing, however, is not as dead as they have reason to suppose it; but, on the contrary, has been in successful, though not extensive use, here and elsewhere, ever since the date of that communication. But in the interim it has received some practical improvements, and, for reasons which it is unnecessary to detail here, I have hitherto (with one recent exception) abstained entirely from publishing any description of it.

In principle, my machine consists of a syphon, combined with the well known "hydraulic ram." Previous to the date of my former communication to the Cultivator, I did not know that any such combination had been attempted; but subsequently two analogous inventions were brought to my notice, both of which, however, were essentially different from my own in construction, and are obviously useless as practical machines, the design of the inventors having been little else than to accomplish the feat of constructing a syphon that should discharge water at the curve.

The subjoined figures and description, will give some idea of the construction and appearance of my apparatus:



Syphon Pump—Fig. 14.



Section of Syphon Pump—Fig. 15.

In the annexed sectional drawing, *a*, *b*, is a hollow dome, or cap, the cavity of which is divided into two distinct chambers, by the partition *c*. This dome is fastened by a flanged joint to the circular plate *d*, *d*. The central portion of *d*, *d*, is sunk into the form of a box, or chest *g*, *f*; that part of which, lying under chamber *a*, is roofed over by *d*, *d*; but communicates with *a*, by a valve *n*, opening upwards. That portion of the chest marked *g*, is still farther enclosed by an upright plate *m*, held to its place by a couple of wedges, not shown in the section. This plate has an orifice at *o*, furnished with a valve opening towards *g*; which is suspended on the spring *l*. From *f*, passes *h*, the long leg of the syphon, and from *g*, *i*, the short leg. In operating the machine, *i*, and *h*, are first filled with water through the screw-plug *e*; as soon as the syphon is free to act, a current commences in the direction *i*, *o*, *f*, *h*. This current, acting on the valve at *g*, soon overcomes the elasticity of the spring *l*, and the orifice *o*, is suddenly closed. The water in *i*, then acts with a momentum due to its weight, and upward velocity, upon the valve *n*, and a quantity of water escapes into *a*, which, when the impulse in *i*, is exhausted, is prevented from returning by the closing of *n*. The moment that *n* closes, a slight recoil of the water in *i*, allows *l* to throw open the valve *g*, and the above process is then repeated. The water which accumulates in *a*, is conducted by a curved pipe attached at *k*, to any station above the machine where it may be wanted for use. The chambers *a* and *b*, never fill with water; they confine, each, a quantity of air, which, by its elasticity, equalizes the currents through *k* and *h*. These air chambers are both indispensable to the perfect action of the machine; and if *k* and *h* are of considerable length, it will not operate at all if they are filled with water. The air in *a*, is obviously under more or less pressure in proportion to the height to which the water is elevated through *k*; while owing to the same cause operating in an opposite manner at *h*, the air in *b*, is rarified, or under less than the pressure of the atmosphere. As water under pressure, in contact with air, has the property of absorbing more or less of it, and then liberating it when the pressure is removed, the air in *a*, has a tendency to diminish, and that in *b*, to increase in quantity; but the position of the valves in this machine is such, that, when it is in action, *a*, is constantly replenished from the overplus in *b*: for the recoiling movement in *i*, above-mentioned, which allows valve *g*, to open, draws in at the same moment a few bubbles of air, from *b*, *f*, at *o*, which air lodges in the cavity under *n*, and is driven at the next pulsation into chamber *a*.

Persons have often attempted, by a syphon, to convey water over elevated ground, to some situation below the fountain head; but have been troubled, and often compelled to abandon the plan, by an accumulation of air in the more elevated portions of the pipe, which, in the course of a few days, has cut off the stream entirely, and rendered it necessary to refill the pipe. This is owing either to a want of sufficient fall between the level of supply and the point of discharge, or to some obstruction of the pipe, either of which causes acts by checking the current through the pipe to that degree, that the air, liberated from the water, (owing to the diminished pressure to which the water is subjected in the upper part of the syphon,) remains and accumulates in the pipe. The only remedy is to obtain more fall, or give the pipe a freer aperture, until the current has sufficient velocity to carry the air through. A velocity of between one foot and eighteen inches per second, is ordinarily sufficient to accomplish this.

The quantity of water which the machine consumes, may be, to a considerable extent, regulated by a small crank, the axle of which enters at right angles to the plane of the above section, just behind valve *g*. This crank, when turned, gives the valve more or less play, and may if desired, be made to close it, and stop its action entirely. When the machine overdraws its supply, and stops from that cause, the syphon pipes do not empty themselves of water, (as would be the case with an ordinary syphon,) but the first few bubbles of air which enter the short leg of the syphon, break by their elasticity, the continuity of the battering column, the different portions of which immediately acquire independent movements, which mutually destroy each other, until the valves cease their motion, and the water throughout the apparatus comes to a state of rest.

At the foot of the short leg of the syphon, is a short plug fitted loosely to the calibre of the pipe, which may be drawn up a little distance into, or thrust down out of the pipe, by means of a rod attached to it. This plug is drawn up into the pipe, for the purpose of closing it, when the syphon is filled. It is also used for starting the machine, at any time, when the pipes are filled, and the water in them at rest; this is done by drawing the plug up, and thrusting it down out of the pipe pretty quickly. The downward draught of the plug, by removing the pressure of the atmosphere for a moment from the column of water in the short leg, allows the spring on the main-valve to throw it open, and the plug, passing immediately out of the pipe, allows the machine to commence its operation.

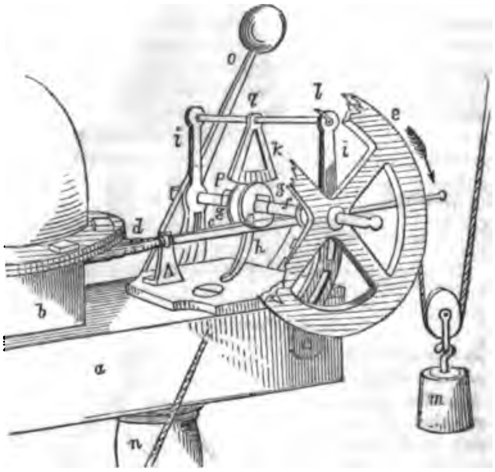
The advantages which this syphon ram possesses over the ordinary hydraulic ram, are, that it can be applied in many situations, where, from the nature of the location, the common ram could not be used, as, for instance, where the source of supply is a well, or where, as is often the case in mills and factories, a pipe may be passed down into a place to obtain the requisite fall, in which, from want of room, the ordinary ram could not be placed; that it is more commodiously situated for repair or regulation, inasmuch as it stands high and dry above, instead of below, the head of water which operates it; and that when water is required to be raised to a considerable height, the elevation of the working parts of the ram upon the summit of the syphon, divides the load to be lifted, relieving the strain upon the air vessel, and making the valves less violent in their action, and consequently more durable.

To make the machine operate well, not less than five feet fall, below the level of the supply, should be obtained, and more than twenty is not desirable. The fall may be obtained within the distance of twenty rods, or twenty feet, indifferently, and the pipes may be laid at any angle, to suit circumstances.

The sizes of the syphon pipes required for elevating water for domestic purposes, are ordinarily between 5-8ths and 1¼ inches diameter, according to the amount of water to be elevated, the height to be overcome, the quantity of supply, &c. Machines between the sizes of 5-8ths and 1¼ inch syphon pipes, consume between 1 and 7 gallons of water per minute, and can be furnished, and ordinarily set up, exclusive of pipes, at prices ranging between $15 and $30. The expense of pipe will, of course, depend on the quantity and size required. In all cases, before erecting them, the following data should be ascertained, as nearly as practicable, viz: the quantity of supply; the amount of fall that can be obtained below the level of supply; the distance within which said fall can be obtained; if the supply is a well, its depth to the water and the bottom; the height to which the water must be elevated, and the quantity required.

The apparatus which I have in use at this place, is employed (as mentioned in my former communication) for elevating water for stock, from a well near the farm yard. It has now a small building, about 8 feet by 12, erected over it, which also covers the well, and contains a wooden cistern above the level of the ground, of the capacity of about ten hogsheads. The machine keeps this cistern filled with water, which may be at any time drawn through a key into a trough in the yard. The building is of wood, the frame of which is covered, inside as well as out, with matched boards, and the spacings thus formed, are filled with cut straw. This precaution (together with those of having two windows facing the south, and leaving, during the winter, the mouth of the well uncovered, so that the warmth of the water may be communicated to the air in the building) gives perfect security from the effects of frost, even in the severest weather. The well from which the water is drawn is not as favorable as many others. The supply of water never fails, but it is very variable. After the wet seasons of the spring and fall, it has furnished sufficient water to keep the machine in constant action, consuming about three gallons of water per minute for a week or two at a time; but in midsummer, the deficiency is such, that it does not operate more than three hours in the twenty-four. This irregularity renders it necessary to start the machine at longer or shorter intervals, as the supply in the well accumulates and is exhausted. The inconvenience of this frequent, although momentary attention, might in a measure be obviated by relaying the syphon with a smaller pipe; but in the winter it is desirable to make use of the whole supply, which pipes and an apparatus small enough to continue in constant action, at all seasons, would not do. The whole difficulty is, however, overcome by a fixture designed for the purpose, which was first attached to the pump last August, and has been in successful use ever since. Its object is to set the pump running, whenever, after an interval of rest, the water in the well shall have risen to a given height. By accomplishing this, the whole supply of the well is used, whatever it may be, and the pump requires no attention.

The construction of this attachment is shown in the adjacent drawing, fig. 16:



Starting Attachment—Fig. 16.

Where *a*, is one end of the frame on which the pump is erected, and *b*, that side of the pump which communicates with the long leg of the syphon; *c*, is a small rod or spindle which passes through the outer end of the chest marked *f*, in fig. 15, on a line with the stem of valve *g*, consequently when pressed horizontally inward, the spindle acts against the stem of the valve and opens it. It is obviously necessary that this rod should pass through into the pump by a perfectly air-tight joint; it is also necessary that when pressed from *c*, towards *d*, (fig. 16) for the purpose of opening the valve, it should have a tendency to return quickly out of the way of the action of the valve. These requisites are obtained as follows: a spiral spring of brass wire, about three inches in length, is wound about the spindle at *d*; one end of this spring is fastened to a short tube, through which the spindle enters the pump, and the other extremity to the spindle near *d*. This spring gives the spindle the necessary outward movement, when pressed inward and released, and the admission of air into the pump around the spindle, is entirely prevented, by having the spiral spring enclosed by a thin tube of metallic gum-elastic. The outer end of the spindle is supported by a guide, which holds it in a proper line for action. On each side of *a*, near its extremity, rise two standards, *i*, *i*, through which passes the shaft *f*, which carries, on its front end, the grooved wheel *e*, a portion of which is represented in the figure as broken away, to give a view of the parts beyond. On the middle of this shaft are two circular discs, *g*, *g*, half an inch apart, through which passes, parallel with the shaft, the key *p*. This key, when the wheel *e*, is revolved in the direction of the arrow, comes in contact with the upper end of a latch, *h*, on the spindle, and if the revolution of the wheel is continued, carries the spindle in the direction *c*, *d*, about half an inch, and then allows it to fly back; but if the wheel be revolved in the opposite direction, the key merely raises and drops the latch, without acting on the spindle.

Through the upper extremities of *i*, *i*, passes another shaft *q*, to which is fastened the pendulous weight *k*. On the front extremity of this shaft is a small spur, *l*, which, when *k* hangs at rest stands nearly horizontal, though with its point a little elevated. From the inner side of that part of the rim of *e*, which is represented as broken away, projects a small pin, which, when *e* is revolved in the direction of the arrow, comes under the point of the spur *l*, and throws the pendule *k* out, towards the pump, elevating it at right angles to the position shown in the drawing, before the pin passes over the spur; but when the wheel is revolved backwards, the position of the spur is such that the pin slides over it easily, tilting *k*, very slightly, in the opposite direction. Over the wheel *e*, passes a cord *n*, on one side of which is suspended the small weight *m*, and on the other a cylindrical float which hangs in the well. The weight of the float, when out of water, is a little greater than that of *m*, and the weight of *m* is sufficient, when not counterbalanced by the float, to carry the wheel *e* around, in spite of the resistance offered by the pendule *k*, and of the force necessary to operate the spindle, and open the valve.

Now let it be supposed that the pump has recently been in action, and emptied the well, and that the float attached to *n* has descended, until the weight *m* is at the position represented; and that the pin in the rim of *e*, is situated about opposite the upper broken spoke. The water rises until the lower end of the float is immersed an inch or two; *m* then begins to preponderate, and as the water continues rising, the wheel revolves in the direction of the arrow, until the pin in its rim comes under the point of the spur *l*. The weight of the pendule then arrests the movement of the wheel for a time, and the water in the well rises eight or ten inches upon the float, before the weight of *m* is sufficient to tilt *k* far enough to allow the pin to pass over the spur. When this happens the pendule loses its retaining power entirely, and *m*, being now but slightly counterbalanced, immediately gives the wheel a half revolution, which operates the spindle, opens the valve, and leaves the pump free to run, until stopped by the exhaustion of the supply of water. In the meantime the float descends, with the level of the water in the well, bringing the parts attached to it back to their original position; they are then ready for a repetition of their action, with the next rise of water.

Previous to the invention of this attachment for starting, I have attempted, once or twice, by simpler methods, to make a float set the machine in action, by operating the plug at the foot of the short leg of the syphon; but the mechanism, though simple, was clumsy, and not reliable. The present device, however, although it has an air of much greater complexity and delicacy, has shown that its movements may be anticipated with as much certainty as those of a well made clock for striking the hour at the proper time. And if a machine does its work perfectly, that fact is ample justification for the use of every mechanical arrangement, that conduces to the perfection of its action, which it may contain.

I do not, however, recommend this attachment as one that should frequently accompany the pump; and have not taken the trouble of writing the above description of it for the purpose of advertising it, or inviting the cavils of those mechanics who may be disposed to be critical on the subject of its general utility. That which I have in use at this place is the only specimen of it, and is daily accomplishing the sole purpose for which it was invented.

ERASTUS W. ELLSWORTH.

East Windsor Hill, Ct., Nov. 30th, 1847.

Domestic Economy, Recipes, &c.

KEEPING BEEF FRESH.—Combe says the *ribs* will keep longest, or five or six days in summer, the middle of the *loin* next, the *rump* next, the *round* next, and the brisket the worst, which will not keep longer than three days in summer.

INDELIBLE INK.—This may be made much cheaper than purchased, as follows: Two drachms of nitrate of silver, added to four drachms of a weak solution of tincture of galls. Another:—Nitrate of silver, one drachm, mixed with a solution of half an ounce of gum arabic in half a pint of pure rain water. Moisten the cloth previously with a strong solution of pearl, or salt of tartar, and iron it dry.

INCOMBUSTIBLE WHITE-WASH.—Pass fine freshly-slacked lime through a fine sieve, and to six quarts of the fine pulverized lime thus obtained, add one quart of the purest salt, and one gallon of water, and boil the mixture, and skim it clean. Then to every five gallons of this mixture, add 1 lb. of alum, $\frac{1}{4}$ lb. of copperas, and slowly add $\frac{3}{4}$ lb. potash, and 4 quarts fine sand. It adheres firmly to wood or brick.

FROST PROOF CEMENT.—Mix tar with sand; it gradually hardens, and as moisture cannot in the least degree penetrate it, it will never crack by frost. This was proved by the accidental upsetting of a tar barrel on a spot of sand—the cement thus accidentally formed, remaining impenetrably hard for years, although under the rain-water spout, and exposed to all weathers.

INK SPOTS, on mahogany, may be easily removed by rubbing them with wet blotting paper, and afterwards rubbing the spot with a dry cloth.

MALAGA RAISINS.—These are all made by merely drying the large white Muscatel grape, without the addition of any ingredient. They are all raised within 2 leagues of the southern Spanish coast, and do not succeed farther inland. The Lexica raisins, used for puddings, are however, produced in the interior. They are gathered when ripe, and spread out upon the ground to dry, which usually requires 15 days, during which time they are never removed, although the drying process is retarded by the dews, which difficulty would doubtless be removed by the use of portable awnings.

TOBACCO.—Kentucky raises more than any other State.

FINE STOCK AND POULTRY OF J. B. HATHAWAY, Esq.

MESSRS. EDITORS—While on a short excursion into Canada some time since, I called to see the stock, poultry, &c. of Mr. J. B. HATHAWAY, about a mile out from St. Catharines. He is the owner of the celebrated blood stallion "Mercey," that was purchased by Com. Stockton at the sale of the stud belonging to the late William IV. He has also some fine blood mares, which, with fine stock of other kinds, renders his place worthy of a visit from every agriculturist.—In the poultry line he seems to be quite an amateur, and has gathered around him a great number of varieties. Of these I will give you a short description.

Of *Geese*, I saw in his yard, the *Chinese*, *Poland*, *Wild*, *Bremen* and *Irish* varieties. The *Chinese* have been described and figured in your pages, and from my experience with them in my own yard, and what I have seen of them in other places, I think for beauty and other qualities, they answer in full the description you have given of them. The *Poland*, have many points of resemblance to the Chinese, and are probably only a cross from them, but are coarser in the neck, larger bodied, and much less graceful in their motions. The *Wild* or *Canada* Goose, has been fully described in your pages; and although on the score of profit not much can be said in their favor, as they do not breed till their 3d year, yet they are certainly a great ornament in a poultry yard. As the Swan cannot be kept domesticated in our climate during the winter, requiring as she does open or unfrozen water the whole time, a very good substitute is found in the Wild and Chinese Geese. Among the ornamental varieties these stand unrivalled.

The *Bremen* geese, in Mr. H's yard, are very large, stately in their appearance, and perfectly white, both male and female; and when feathers and carcass are the main objects desired, these are a valuable variety to keep.

The *Irish* goose, is a large and coarse bird, with legs like a mill post, but I could discover nothing particularly desirable in them unless for the purpose of crossing with the common varieties. One of these is figured and described in the *London Illustrated News* of last July, as having taken a prize at the show of the Zoological Gardens; there is also figured a goose from the River Orinoco. S. A., having a small plump body with very long legs, like those of a Stork. Of this last variety I have heard of no specimen as yet in the United States.

Of *Ducks* kept by Mr. H., I saw fine specimens of *Muscovy*, and of others more common; of the splendid *white Topknots*. the *Wild black duck* domesticated, and the *Red-headed, capped Wood duck*. This last is very small, but surpassingly beautiful, and is the first instance within my knowledge of its being domesticated.*

Mr. H. keeps a number of *Golden Pheasants*, both male and female; between them and the various breeds of barn yard fowls, has a great variety of crosses; some of which, particularly the Golden Topknots, which are a cross between the Pheasant and the Poland fowl, are a great ornament in a poultry yard. Of this variety I have bred a good many myself the last two or three years, and were I to keep only one variety, should rather be inclined to give the preference to these above all others. Their golden and variegated plumage, large brilliant black eyes, and liveliness of motion, invariably arrest the attention of strangers; while in the number of eggs they produce, they are equal to any other kind.

Besides the poultry varieties already enumerated, Mr. H. keeps Peacocks, Guinea-hens, wild Turkeys domesticated, &c., &c.; and I observed a pair of Sand-hill *Cranes* from Illinois, following him around his premises. These were perfectly at home among the other poultry, and when at rest, usually drew one leg up under their body, presenting quite a unique appearance. Mr. H. has also in a process of domestication with his other poultry, a lot of *Prairie Grouse*, or "Prairie Hens" from Illinois. Overhead, and basking in the sun, were nearly all the varieties of domestic pigeons; while the group was filled out by a troop of deer bounding over the yards, and an enormous Black bear chained in a corner to keep sentry over the whole.

Having a small pond of water near his house, Mr. H. has erected a line of poultry sheds on the north side facing the South, with divisions for different varieties, feeding boxes, &c.; and here, within an enclosure of perhaps two acres, all his variety of poultry live in harmony, and are a source of great pleasure to their owner and his family. And why should not every farmer add something of this kind to his other stock to render home more attractive? Why not multiply forms of beauty and sources of innocent pleasure, when they can be so cheaply obtained? A very little additional outlay would enable almost any one to increase the beauty and attraction of his place, so that his children would feel, that "there is no place like home."

The Agricultural Society of Niagara district, in which St. Catharines is situated, have a show and fair twice each year, spring and fall; the former of which is made the occasion of the sale and interchange of stock, and the hiring of farm laborers. In their list of premiums, I observed that the Society offered the premiums to the *best* horses, cattle, &c. exhibited, without designating any particular breeds. This probably has some tendency to repress those jealousies, which are apt to arise sometimes among farmers, when foreign stock is particularly commended.

The land all through the Niagara District, extending from the river to Hamilton, is in a fine state of cultivation, and bears prices varying from $20, to $60 per acre, according to improvements, proximity to villages, &c. Agricultural papers are extensively circulated among the more intelligent farmers, and their good effects are seen and acknowledged. One thing I could not observe but with high pleasure,—which was more common among the English and Scotch farmers,—the building of their houses some distance back from the road, and surrounding them with shade trees. This was an evidence of good taste, and an ornament of no mean value in the rural landscape. When will *our* farmers learn to appreciate such things?

Buffalo, Dec. 1847. H. A. PARSONS.

RIPENING OF WHEAT.—A writer in England, for the Genesee Farmer, says that from the cool weather and occasional showers, wheat requires there twice the time to ripen that it does in western New-York, which he thinks is a reason the grain fills so much better than here.

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* The wood-duck has been frequently domesticated. We have seen a beautiful group of them in the Bowling Green fountain, New-York.—EDS.

SKETCHES OF MASSACHUSETTS FARMING.*

AT South-Deerfield we called on Mr. T. S. **SARGENT**, who, besides showing us the "lay of the land" in his neighborhood, was so kind as to convey us, by way of "old" Deerfield, to Greenfield.

About two miles south of Greenfield, is the farm formerly owned by Rev. H. **COLMAN**, and where he for several years resided. The readers of the early volumes of the *Cultivator*, the *Genesee Farmer*, and the *New England Farmer*, will recollect his interesting communications, dated at "Meadow Banks." It is a beautiful place—we scarcely know of one which, as a residence, we should think preferable. The house is situated at the base of a handsomely rounded hill, on an elevated shelf of land, overlooking to a large extent the fertile alluvial grounds on the Deerfield river. The farm, when Mr. **COLMAN** owned it, consisted of 150 acres, but it has been divided, and the homestead at present only comprises 50 acres. It is owned by Mr. **DAVID WAIT**.

The meadows here are generally overflowed in the spring season, and a deposite is left by the water which keeps up the richness of the soil. Large crops of Indian corn and grass are here obtained. Mr. **WAIT** informed us that three tons of hay are usually taken per acre, and he had got nearly six tons from an acre, at two cuttings, in one season. In good seasons, with proper cultivation, he thinks fifty bushels Indian corn may readily be obtained per acre, without manure.

A little below the place just mentioned, we called at the farm of Mr. **SAMUEL CHILD**. He has kept for several years the Durham bull *Northumberland*, bred by E. P. **PRENTICE**, Esq. This animal has been of great benefit to the vicinity, and might have been still more useful if the farmers had properly appreciated him. We were told by many persons that his progeny have proved very valuable. They are thrifty, and the heifers are excellent for the dairy. We saw several calves and some other young stock that were very promising. Mr. C. has a good farm, but we were so pressed for time that we could not go over it.

Deerfield is an old town. Its settlement was commenced by the English 177 years ago. The settlers were undoubtedly attracted by the large extent of rich alluvial land here, on which the Indians had, from time immemorial, raised large quantities of corn. Capt. **DAVID HOYT** estimates that there is not less than 5,000 acres of rich intervale within the limits of the town, on Deerfield river.

In answer to some inquiries, we have received a letter from Gen. **EPAPHRAS HOYT**—a very intelligent gentleman, upwards of eighty years of age—from which we make the following interesting extract:

"Our town [Deerfield] was first settled by the white people 1670, and at that period I believe the intervale was cultivated by the Pocumtuck Indians, and considerable quantities of corn raised. At the close of the *Pequot war* in Connecticut, the English were suffering for want of bread, and in 1637, agents were sent from Hartford and other towns on the river, to the Indians at Potcumtuck [Deerfield] to procure Indian corn, and fifty loaded canoes, conducted by the Indians, descended the Connecticut with that article, which relieved the people from their distress.

"How long our intervale has been cultivated is uncertain—probably for centuries before it was settled by the English. Manure is now required on those parts not flowed by the river; and as the floods are now less frequent than formerly, manure is required in increased quantities."

The settlers here soon became prosperous, and the neighborhood was noted for its agricultural productions at an early day. But it was with great reluctance that the Indians yielded the possession of this fine region which, to them, was almost a paradise, and designed, as they believed, by the Great Spirit especially for his Red children. Their enmity was manifested by frequent and bloody attacks on the whites whom they regarded as usurpers. The town was several times destroyed, and most of the inhabitants put to death or made captive. A monument at South Deerfield commemorates an event which occurred in 1675. The Indians made a descent upon the town, and burned nearly all the houses. The settlers had raised considerable quantities of grain, which was deposited in stacks. This, the neighboring inhabitants, deemed it advisable to secure, and a detachment of soldiers and teamsters, eighty-six in all, was sent with teams to convey it to Hadley. On their return with the grain, they were ambuscaded by the Indians, and the commander, Capt. **LATHROP** and seventy-six men, slain. The monument was erected, with appropriate ceremonies, in 1838. A small stream which runs near it, received the name of "*Bloody Brook*," from its waters having been literally crimsoned by the blood of those who fell in this sanguinary conflict.

A still more disastrous calamity befel the town on the 29th of February, 1704. It was suddenly attacked by a party of French and Indians from Canada; every dwelling but one was reduced to ashes, many of the inhabitants put to death, and the remainder (except a few who escaped) carried away captives—112 of the latter being taken to Canada. The house which escaped the conflagration, commonly known as the "old Indian house," is still standing, and is occupied as a dwelling. It was erected twenty years before the event referred to, and is, therefore, 163 years old at the present time. It is built of wood—the frame oak, and still in quite a sound condition. In their attack, the Indians cut a hole through the outer door, which still remains as it was, and the marks of the hatchet show as plainly round the edges, as though they had been made but a short time since. The enemy discharged their guns into the house through the door and windows, and in one of the rooms, several bullets are still visible in the timbers. The attack was in the night and entirely unexpected by the inhabitants, who were quietly sleeping in their beds. Such was the case with the **SHELDON** family, who resided in the house; and one of the bullets now to be seen in the wall, killed Mrs. S., passing through her head, just as she started from her pillow to learn the cause of the outbreak.

The house, being a large one, was preserved by the marauding party to store their plunder, and shelter themselves till they were ready to take their departure. It is justly regarded as an interesting monument of the dire event of which we have spoken. For the last hundred years it has been in the possession of the **HOYT** family, and our venerable friend, from whose letter we have given an extract, we are informed was born here, in 1765.* We are much pleased to learn, that measures have been taken by the citizens of Deerfield and vicinity, to preserve the old house; and by making it the repository for Indian antiquities, and relics connected with the history of the place, render it still more an object of interest than it has hitherto been.

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* Continued from our December number.

* A more detailed account of the tragic scenes connected with the early history of this neighborhood, will be found in the histories of Massachusetts relating to this period.

In Deerfield as well as in several towns in this vicinty, there has been of late years considerable quantities of broom-corn produced. The value of the brooms manufactured from this article in Deerfield, was not long since estimated at $10,990 per annum.

We had but little time to view the country in the neighborhood of Northampton, as we only arrived there the afternoon previous to the cattle show, and the weather happened to be unfavorable. We called on **Wm. Clark**, Esq., who, besides being considerably engaged in agriculture and horticulture, is carrying on a large paper manufactory. He showed us some of the finest pears and grapes that we have seen. Mr. C. has been greatly instrumental in encouraging improvement in husbandry. He originated, we believe, a plan of seeding land to grass, which has been, with good success, considerably adopted. Fields occupied with Indian corn are made smooth at the last working, (no hills left,) and grass seed sown, and when the corn is harvested it is cut close to the ground with a hoe. The grass gives a good crop the next season.

Mr. **Henry Strong** was so kind as to take us in his carriage and show us a portion of the large body of intervale here. He estimates that there is not less than 7,000 acres of this kind of land in this town. Most of it is very productive. The lots are not usually divided by fences—stakes only marking the lines between the various owners. Numerous roads or avenues are left, so that every lot is readily accessible; and a ride through these beautiful grounds, loaded with the richest crops of various kinds, is one of the most delightful that can be imagined.

A little below Northampton, the river passes between two mountains—Mount Holyoke on the east, and Mount Tom on the west; and at some former period, there appears to have been a connecting ridge between the two elevations, which has been worn away as the river deepened its channel. The barrier to the current which existed here, is supposed to have formed a lake above the mountains, and occasioned the deposite of the broad alluvion which we have described. The river until lately, made a remarkable bend at this place, called the "ox-bow." The distance round this singular turn was between three and four miles, but by cutting across a neck of land, only about twenty rods in width, a comparatively straight current was given to the water, and the old channel is filling up, which will afford many acres of excellent land.

Mr. S. H. **Bates**, son of the late Hon. **Isaac C. Bates**, has a farm of nearly two hundred acres, most of which is excellent land. He was. at the time of our visit, engaged in removing and repairing his buildings, some of which had become old and out of order. He and Mr. **Strong** purchased a Hereford yearling bull of Mr. **Sotham** last spring, which bids fair to make a first-rate animal. We have before mentioned* that the Hereford bull sent to this country upwards of twenty years ago by Admiral **Coffin**, was kept here for several years.

The village of Northampton has been long and justly celebrated as one of the pleasantest in New England. There are many neat and tasteful residences, and they have generally an agreeable rural air. The "Round Hill School," once so popular, was located here. A "Hydropathic Hospital" has taken its place. We passed through the grounds belonging to the establishment. The site overlooks the village, and commands besides a view of the neighboring towns, Amherst, Hadley, &c., embracing extensive landscape scenery, which for beauty and loveliness can hardly be surpassed.

Farmers Clubs.—Besides a state agricultural society and several county societies, there are in Massachusetts many neighborhood associations or clubs, whose object is improvement in rural affairs. Most of them are sustained with a good deal of spirit, and their general usefulness is obvious. In Conway—a town located among the hills of Franklin county—there is a flourishing society of this kind. The members hold an annual exhibition of live-stock, and agricultural and household products. The various crops are examined while standing in the field, by committees chosen for the purpose. The club has been in existence for several years, and its favorable effects are seen in the various departments of farming; animals have been improved, the yield of crops augmented,* products of household manufacture increased, and their quality improved, and a liberal and enterprising spirit generally infused.

Amherst, in Hampshire county, has a similar association. Their show, held at Amherst in November last, is spoken of as one of much interest—a very large number of people having been called together. Addresses were delivered by President **Hitchcock**, of Amherst College, and others.

Comparative advantages of this Section.—Ever since the first settlement of the country, the Connecticut valley has been celebrated for its beauty and fertility, and from what we have seen, we think it probable that, taking into consideration the character of the soil, the ease with which it may be worked, the variety of productions that may be cultivated and which find a ready sale at the highest prices—there is no part of the country which possesses greater advantages than this. Add to this the healthfulness of the climate, the excellence of its social and civil institutions, the beauty of its scenery, its means of easy communication, and other advantages, and where can be found a more agreeable or desirable region?

Farming in Turkey.

Dr. Davis of South Corolina, at the solicitation of the Turkish government, has gone to that country, to introduce modern improvements in agriculture. He found the only plow used in Turkey, a log, elevated at one end on two wheels, shod with iron at the lower extremity. Wheat is cut with grass scythes, raked up, and then trodden out by horses on the ground. It is cleaned by throwing it up in the wind. When ground, there is no separation of bran and flour.

There is usually no frost till January.

Under the improved culture given by Dr. Davis, the cotton crop is found to do better than in the Southern States of the Union.

Indian corn was formerly sown broadcast by the Turks, and received no cultivation. The ill-success of such culture may be easily guessed. Planted in rows, and cultivated with the one-horse plow, with which the Turks are delighted, it promises to succeed finely.

Subsoiling.—The Mark Lane Express notices improvements made on the farm of Lord Stairs, in Wigtonshire. One part was drained, subsoiled, limed, and thoroughly pulverized, and then produced forty bushels of wheat to the acre, where only twelve were raised before.

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* Cultivator for 1847, pp. 41, 42.

* For a notice of the crops of Indian corn raised by members of this Club, see Mr. Clary's remarks on the discussion in relation to the "Profits of Farming," at Boston, published in our last volume, page 206.

REMARKS ON BREEDING HORSES—No. II.

EDITORS OF THE CULTIVATOR—In a previous article I insisted that each person setting out to breed horses ought, in the first place, to determine which of the various species he will produce. I intimated that every breeder should aim to produce the horses most approved in our city markets, because these command the highest prices. I also maintained that in breeding carriage horses, especially, thorough-bred stallions, of the staunchest character, should in all cases be employed. My reasons for this opinion are various. It is sufficient here to say, however, that in my judgment, from these alone can be obtained, *with any reasonable degree of certainty* the peculiar style of horse most approved for that department of service. A horse uniting force and spirit with docility and good temper—size and strength with gloss of hair and symmetry of form, and a proud, lofty carriage with that peculiarly graceful and gliding step that can seldom be obtained without "a strain of gentle blood." I also, in my former article made some distinction between a *staunch* thorough-bred, and a mere race horse; I intimated that pedigree, however *true or high*, is not the only requisite. *Substance* is indispensable. This is indicated by a full round carcase—a deep flank—a wide loin, short between joints, a heavy flat bone below the knee, and a restless, resolute style of action.

Admit it all, perhaps the reader will say, but where shall we find such an one? This, I confess, is not an easy question to answer; and perhaps indicates the strongest objection to my theory. I freely admit that among all the stallions that I have ever seen, I have not found one that fully met my standard, in every particular; still I have seen many that approximated it sufficiently for all practical purposes, and among these I will name the imported horse "Consternation," that obtained the first premium of the N. Y. State Agricultural Society, at its fair held in Utica in the month of September, 1845. This horse was imported, and is owned by C. T. Albott, Esq., who resides near Rome, in Oneida county, N. Y. He lacks that majesty and stateliness of figure, that I have described—and a little too, of that force and impatience that I so much admire in a stallion. But on the other hand, he has remarkable compactness, and a development of bone and muscle equal to any thorough-bred horse I ever saw. He is short-legged too, and has a very vigorous and hardy appearance. On the whole, I am inclined to think his stock will prove equal to that of any horse in our country. I am very glad to hear that the prejudices at first existing, among the farmers in the neighborhood of Rome, against this horse, on account of his thorough-breeding, are fast disappearing as his colts begin to develop themselves. I am very glad also to know that Mr. Albott has recently purchased a mare that he thinks every way worthy of "Consternation," from which he expects to breed elegant carriage horses.—Knowing as I do, very intimately, the qualities of the mare, I venture to predict for him a degree of success quite equal to his anticipations.

In addition to "Consternation," there is "Pryor" also; for whom we are indebted to H. S. Randall, Esq. at whose solicitation he was sent to Cortland by his owner, Mr. Thompson of Maryland. He is now owned by a company of gentlemen at a place called Edmeston Centre, in Otsego county. "Pryor," I have never seen, but judging from a filly sired by him, which I own, and from the concurrent testimony of many gentlemen who have seen him, I cannot doubt that he deserves all the patronage his owners may desire for him.

"Tornado" is another fine horse. He is owned by Mr. Long of Washington county, and received the first premium at the recent fair of the N.Y. State Agricultural Society at Saratoga. In some respects he is decidedly the noblest horse I ever saw. His attitudes are superb—his body, neck, head, eye and ear are admirable—he fails sadly, however, in his fore leg below the knees especially in the back sinews and pastern—his color also is too light; indicating to me a slight delicacy of constitution, or a little over-fineness of breeding. Still, he is truly a fine horse. Besides these, I have heard flattering accounts of "Hornblower," near Batavia; also, of his half-brother "Fiddler," now in Orange county. Yet after all, it must be admitted that first-rate, thorough-bred horses are so scarce in our country, that it is difficult and expensive to procure their services. There is no reason why this should be so, except that hitherto they have not been properly appreciated by our farmers. There are but few men in our country who make the science of breeding a study—very few, even who have much pride about it.—Most farmers content themselves with the horse nearest to them, provided he is of good size and color, and his owner will insure a foal for three or five dollars. No wonder therefore, that "dunghills" should be so plenty and thorough-breds so scarce.

In many sections, however, this indifference is passing away. Farmers are beginning to see that it is more profitable to raise the *very best* horses; though the first expenditure be double—or treble even. That the most profitable horse to breed from *is the one that offers the greatest certainty of producing a first rate foal every year*, though his services may cost ten dollars instead of three. I am confident that, as this opinion prevails, thorough-breds will multiply, for there really is but little certainty in breeding from any other than a thorough-bred stallion.

I am well aware that there is a prejudice against thorough-breds to be overcome. This prejudice has arisen, partly from the false pretensions to thorough-breeding set up by many that are not more than a quarter or one-eighth in the blood. But much more from the fact, that the thorough-breds heretofore introduced into our country have been quite unworthy representatives of their species—being, for the most part, little, gaunt, spindle-legged animals, that in consequence of some defect of constitution, or over-fineness of breeding, have broken down in training, and been sold for a song. Farmers do not generally know the fact, that the genuine, old fashioned thorough-bred horse, possesses greater power of endurance, greater energy, and in proportion to his weight of body, a greater development of bone and muscle than any species of horse in existence.

But I have promised to say something about saddle horses, trotting horses, and draught horses.

A truly elegant and valuable saddle horse cannot be obtained without breeding him expressly for that purpose. He should be at least three-parts bred, *and should be used under the saddle exclusively*. But as the demand for these horses is not great, I can hardly commend them to the attention of breeders.

Trotting horses are in far greater demand, and always bring a high price. It is very profitable to breed them. They are of all shapes—all sizes—all species. Some have sprung from Canadian crosses; some from

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WATER RAMS.

A SUPERIOR article of Water-Rams for sale. Price $15 to $18. A. B. ALLEN & Co., 187 Water-st., N. Y.
Jan. 1—2t.

WANTED TO PURCHASE

SOME superior Potato Onions, for seed; any person having from five to twenty bushels for sale, will find a customer, by applying, (if by letter, post-paie,) to CHARLES SPRATT, Utica.
Jan. 1—2t.*

NEW AGRICULTURAL WAREHOUSE.

SAMUEL C. HILLS, No. 189 Water-st., New York, offers for sale Prouty's Plows and Horse Rakes, Wilkinson's Harrows, Corn Mills, Corn Shellers, Straw Cutters, Horse Powers, Churns, Grain Cradles, Scythes, Hoes, Rakes, &c., &c.

Patents secured upon moderate terms, and patent articles and rights bought and sold on commission.

New-York, Jan. 1, 1848—3t.

SPRING WHEAT AND RYE.

SUPERIOR Spring Wheat for sale at $2 per bushel. Spring Rye at $1.75 per bushel. Also a complete assortment of Field and Garden Seeds of all kinds principally grown, and put up expressly for use. A. B. ALLEN & Co., 187 Water st., N. Y.
Jan. 1—2t.

SCIONS FOR WINTER GRAFTING.

WM. R. PRINCE & Co., sole proprietors of the Linnean Botanic Garden and Nurseries, and of *the only extensive specimen grounds of bearing Fruit Trees on this island*, will supply scions at the following rates, and their accuracy is expressly guaranteed.

For not less than forty varieties that are priced at ordinary rates in our Catalogues, 25 cents per parcel, or fifty cents per dozen.

New varieties priced over 50 cents in our catalogues, will be charged the same per parcel as for a tree.

Plentiful well known varieties, will be supplied at $20, down to $10 per 1000, according to quantity and variety.

Scions of all Trees and shrubs that grow from cuttings will be supplied at proportionate rates.

Flushing, Jan. 1st, 1848.—1t.

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TAR PAINT for sale at the Albany Gas Works: A *very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

TO AMATEURS OF THE VINE.

ALL PERSONS who possess one or more *new and truly valuable* varieties of the native Grapes, either wildings or seedlings of their own growing, are solicited to send a well-rooted vine, or some scions, well packed with swamp moss around the roots, to the subscriber, by Express or otherwise, directed to 205 Broadway, New-York, and to state what they desire as a reciprocity.

Jan. 1—1t. WM. R. PRINCE.

TO NURSERYMEN AND GARDENERS.

THE subscriber, intending to change his business and remove to another state, offers for sale at his Nursery, near Norristown, Pa., his stock of FRUIT and ORNAMENTAL TREES, GREEN-HOUSE PLANTS, &c., at a low rate.

For particulars address PERCIVAL NICHOLS, Norristown, Montgomery Co., Pa.

Dec. 11th, 1847—1t.*

AGRICULTURAL IMPLEMENTS FOR SALE.

HORSE POWERS.—Taplin & Eddy's Circular Horse Powers. Price, $60 to $75; Wheeler & Whitman's Endless Chain do., single-horse, $75; double-horse, $100; Trimble's, Warren's, and Child's Cast-Iron do., $50 to $75.

GRAIN THRESHERS.—Wheeler's Thresher at $25; ditto with Separator, $35; Taplin & Eddy's Thresher, $40; Trimble's and Warren's do., $25; Whitman's and Pitts' Thresher, with Separator and Cleaner, for one or two horses, $100. Pitts' Thresher, Separator, Cleaner, and Horse-power, complete, $200.

CORN SHELLERS.—Corn Shellers to work by hand or other power. Price, $3 to $50.

STRAW CUTTERS.—Straw Cutters of various kinds, to work by hand or other power. Price, from $3 to $40.

GRAIN MILLS.—Grain Mills to work by hand or other power. Price, from $5 to $30. Do. of Burr Stone, from $50 to $125.

CORN AND COB CRUSHERS.—These grind corn and cobs together Price, $35 to $50.

SPICE AND COFGEE MILLS.—Several of these are of a new and superior kind. Price, from $2 to $10.

PLOWS, for the South and North.—Superior Plows of various kinds for sod and stubble land, from one-horse to six horse draft. Also, the Scotch Iron, Centre-Draft, Self-Sharpening, Side-Hill, Wet Meadow, Double Mould Board, Paring, and Sub-soil Plows, with common or patent dial clevis. Price from $2 to $20. The woods of the above plows are of choice white oak, and got out by patent machinery. The castings are of the best kind.

Also a complete assortment of all kinds of Agricultural and Horticultural Implements, Field and Garden Seeds.

A. B. ALLEN & Co., 187 Water-st, N. Y.

Jan. 1—2t.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5,000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15,000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

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Syracuse, N. Y., Nov 1—6t.

THE CULTIVATOR

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HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Downing's Fruits and Fruit Trees,

WITH COLORED PLATES.

THIS is truly a splendid and valuable work. It contains seventy colored plates, with representations of eighty-six different varieties of fruit. *Seventeen* of these are apples; *twenty-four*, pears; *twenty*, cherries; *two*, apricots; *seventeen*, plums; *three*, peaches; *one*, raspberry; and *one* strawberry. They are the finest style of lithographic prints, colored by hand. In nearly all cases, they are remarkably accurate delineations of nature; and they have the excellence of being entirely free from the over-coloring which is so prevalent among illustrated works of the kind. Gorgeous daubings of the most brilliant paints, are infinitely inferior to the softened lights and shades of the skilful copier of nature. As paintings, however, they will not take the highest rank; neither indeed should they; for in that case it would be necessary to represent them in too strong a light, relieved by too heavy shades, to be well adapted to close viewing, as in a book held in the hand. The light and shade is mild, so that the true colors of the specimens are not obscured by heavy shadows.

There is much uniformity in the excellence of the coloring throughout the volume—the accuracy with which the peculiar shade of color, of nice distinctive tint of each variety is given, in most cases, is admirable; yet in the copy before us, we are particularly pleased with the figure of the Columbia, Lawrence's Favorite, and Duane's purple plums. the Bilboa and Marie Louise pears; and that of the Fastolff raspberry is extremely fine and natural, the soft pulpy juiciness of the berries being quite conspicuous. On the other hand, we should regard the figures of the Bloodgood and Bezi de la Motte pears, and Bullock's pippin, though good pictures, as of a greener hue than is usually found in the real specimens. The drawing of Baumann's May, appears to have been made from an immature specimen;—when fully ripe, this cherry is nearly black, and comparatively round and plump, the angles disappearing as it ripens. The Seckel pear hardly exhibits enough of the brownish russet which marks this variety. The Winter Nelis, also, we should think, should be more generally overspread with the russet streaks, found on the average of specimens.

In addition to the plates, this volume has all the outline figures, and all the corrections of the seventh common edition. The typography and binding are of the highest order; and the work taken altogether is unsurpassed. We should have been glad if the binder had relieved us from the necessity of so frequent a resort to the paper-knife.

Quince Stocks for Pears.

Much attention has been lately directed towards the use of the quince as stocks for the pear. The former opinion, of the extremely short duration of pear trees on the quince, seems to have been in part, founded in error. The late S. G. Perkins of Brookline, Mass., had perfectly healthy and productive trees, which had been transplanted more than twenty years. T. Rivers states that at the celebrated Chiswick Garden, England, there are trees twenty-five years old, which are "pictures of good health and fertility." And we are assured on good authority that in Germany there are healthy trees of far greater duration.

A great advantage in the use of the quince stock, is early productiveness, only two or three years being required from the time of grafting before the tree commences bearing. Another, is the little room they occupy, from the character of dwarfs which they assume, and they may be planted within ten feet of each other. Hence they are admirably adapted to limited gardens, where it is desired to cultivate for crops the intervening soil; for branching within a foot of the ground, and rising only eight or ten feet high, they shade the surface and exhaust the earth but slightly. They, however, need a rich soil and good cultivation, and are hence unfit for the grassy orchard, where such treatment is not given. And yet we can by no means say that they are not in some localities, well adapted for market products; for an eminent English cultivator, T. Rivers, of Sawbridgeworth, who has had abundant experience in their cultivation, had last summer a plantation of no less than 1500 trees of the Louise Bonne de Jersey alone, for supplying the London market, and intended the past autumn, to increase the number to 3000.

All pears, it is well known, do not succeed equally well when treated in this way. A large portion of the varieties appear to be but little changed in size and quality; but a few are vastly improved, and on the the other hand some do not succeed at all, when grafted or budded directly upon the quince. Experiments are much needed; and with the hope of encouraging their increase, a few results, with some of the most celebrated varieties, are given.

The *Duchesse d' Angoulême* has long been known to be incomparably improved on quince, and its culture at present is hardly attempted by good cultivators on the pear. *Beurré Diel* is much higher flavored; Rivers says "this pear seldom ripens well on the pear stock; on the quince the fruit are larger, more handsome, of perfect flavor, and they invariably ripen well." He also states the following fact relative to the *Beurré d' Aremberg*:—"Of this, I ate my best specimens about the middle of last April; they were vinous, juicy and delicious, from plants on the quince. Specimens from plants on the pear stock, kept only till the end of February." It has also been found in this country to succeed finely on the quince. Of the *Glout Morceau* his report is highly favorable:—"Grows freely on the pear stock and blooms freely; but seldom bears any clear fruit; they are generally full of spots, and often do not ripen at all kindly. On the quince stock it bears clear handsome fruit, which invariably ripen, and are very highly flavored." M. P. Wilder, of Boston, says, "Few varieties succeed so well on the quince as the Glout Morceau; a tree of which, in my own ground, *annually produces a barrel of large, perfect fruit*. In growth, it is more luxuriant on the quince." Manning says of the *Easter Beurré*, "it bears abundant crops, grafted either on the pear or quince;" but Rivers asserts that "on the pear stock [in open ground] it is a most crab-like pear, bearing but very seldom and never ripening; on the quince it bears well, is of high flavor and always ripens in April and May; it is, however, inclined to be gritty at the core, the only pear I have found to be so on quince stock." This unfavorable report of the Easter Beurré, when on pear roots, we fear will be found to apply to a considerable extent in most localities here. It is on this account that M. P. Wilder excludes it from his list of the "five best winter pears" in the Horticulturist; although he remarks it succeeds better on the quince. A writer in the Prairie Farmer states, however, that he has found trees of this variety usually liable to be broken off by wind at the juncture of the quince and pear. Of the *Wilkinson*, Manning remarks, "If grafted on the quince, it is smaller, more prolific, higher flavored, and a brighter red cheek, than if grafted on the pear stock." A remarkable change for the better was found by T. Rivers to take place in the *Fortunes*, which was "a perfect crab" from trees on the pear stock, but very melting and juicy, and a good pear on the quince. The *Jargonelle* and *Passe Colmar* were both found by this distinguished cultivator, to be greatly improved in quality. No variety however, appears to be more *at home* on the quince than the *Louise Bonne of Jersey*, whether in this country or in England. "This," says Rivers, "of all the pears I know, is most benefitted by working on the quince. My specimen tree, on a pear stock, now twelve years old, has scarcely borne a dozen good clear fruit, and some standards of nearly twenty years growth canker at the tips of their shoots, and their fruit is, in most seasons, spotted and misshapen. On the quince how different! I have trees from three to five years old; full of fruit, and these have hitherto every season been large, remarkably high colored, beautiful, and of the highest flavor." Cheever Newhall, of Dorchester, Mass. states, that while the *White Doyenné* succeeds well at that place on quince, it is worthless on pear stock; the *Madeleine* is fine on its own roots, but cracks, and is astringent and worthless on the quince. The *Golden Beurré of Bilboa*, according to J. M. Ives, of Salem, succeeds well on a quince stock, growing "large and beautiful."

Besides these varieties already named on the authority of T. Rivers, as being improved on the quince, he gives the names of the following in his article on this subject in the *Gardener's Chronicle*, from which the preceding remarks have been quoted:—

Beurre d' Amalis,
" Ananas,
" de Capiaumont,
Bonchretien, Williams',
Chaumontelle,
Citron des Carmes,
Colmar,
Colmar d'Aremberg,
Comte de Lamy,
Crassane,
Doyenne Gris,
" White,
Duchesse d'Orleans,
Forelle, or Trout Pear,
Franc Real, Summer,
Gratioli of Jersey,
King Edwards'.

In the same article, the following are given as not succeeding well on the quince; unless double worked, which is done by budding or grafting some freely growing variety on the quince, and then re-grafting the "refractory sort" into the pear-shoot thus obtained.

Bergamot, Autumn,
" Gansel's,
Beurre Bosc,
" Ranz,
Broom Park,
Brougham.
Crassane, Althorp,
" Winter,
Dunmore,
Hacon's Incomparable,
Inconnue, Van Mons, 175.
Jean de Witte,
Marie Louise,
Monarch. Knights',
Nelis, Winter,
Ne plus Meuris,
Saint Marc,
Seckel,
Suffolk Thorn,
Thompson's,
Urbaniste.

The object of this double working is to enable all these varieties to partake of the improvement wrought in their quality by working on quince.

There are a few varieties, in which, we perceive "doctors disagree," probably from a difference in climate and other influences, and which would seem to indicate that a successful trial on quince in one country or region, may not certainly prove its fitness for another. For instance,—the Citron des Carmes (or Madeleine) is named in the first list, as among pears improved on the quince, although Cheever Newhall of Mass. found it "astringent and worthless" when so treated.—Again,—Williams' Bonchretien (or Bartlett) is named in the same favorable list; but in Manning's Fruit Book, (p. 43,) this variety is cited as an example of pears which do not thrive well directly upon the quince. On the other hand the Winter Nelis is placed in the second or unfavorable list; M. P. Wilder however, remarks that its growth is stronger on the quince to which it seems well adapted. The Beurré Bosc is widely known to be of difficult growth on the quince; Rivers says it is "exceedingly refractory,"—and that he doubts its success when double-worked. J. M. Ives of Salem, states, however, in the *Horticulturist*, that he has grown this pear *directly* on quince for many years, and that it grows luxuriantly, but bears poorly; but that when double-worked it does admirably.

It is hardly necessary in this article, to remark that the common quince is of too slow growth for pear stocks; the variety known as the Portugal Quince, or some other equally vigorous, being necessary.

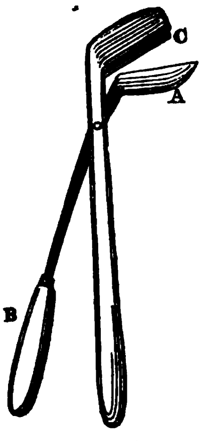
To insure safety from the *borer*, S. G. Perkins had his quince-rooted pears examined regularly twice a year, once early in summer, and once at mid-autumn; his gardener going over six or seven hundred trees in a day—a comparatively light task.

Grafting.

Since root-grafting has been so generally adopted for the propagation of the apple, a saving of valuable time is effected by performing the work within doors during the latter part of winter. It is hardly necessary here to repeat the directions so often given for this operation, yet a few hints may be of use to some. After many years trial, we are satisfied that the application of small wax plasters, closely bound, is far more certainly followed by success, than their omission, or the mere use of tow ligatures. In some seasons, the difference may not be strikingly apparent; but in others, the losses from the neglect of the wax, will more than triple those with its use. Whip grafting, with tongues, being usually adopted, the tongues should be of sufficient size and thickness to interlock with firmness, requiring considerable force to separate them. Hence large roots, and thrifty, well ripened scions, are indispensable. From repeated observation, it also appears, that grafted roots succeed decidedly better in soils with a considerable portion of clay, or in strong loams, than in lighter soils, and especially those of a gravelly nature. Where portions of the root six inches long, or nearly the whole root of a single tree are used, the growth is better or more certain than when cut into smaller parts. In packing them away in boxes, after having been grafted, wet saw-dust will be found most convenient, being much lighter and more portable than sand, and quite equal in other respects.

Grafting the *cherry* can hardly be done too early. The writer has never succeeded better, (losing scarcely a graft in a hundred,) than when the work has been done while the snow yet remained on the ground, using a furnace or chafing dish to soften the wax. It is important also that the plum be grafted before the swelling of the buds.

In all kinds of grafting, it is very essential that the freshly cut faces of the graft and stock be brought into as close and perfect contact as possible, that the sap and juices may uninterruptedly pass from one to the other. Hence a sharp knife, to make a smooth, clear face on each, becomes indispensable. In cleft-grafting, however, (a mode which has some advantages over all others,) as it has been usually performed, the *rough, split surface* of the stock comes in contact with the graft, and the union is imperfect. We notice in the last number of the Horticulturist, a description of a newly invented implement, called the *Stock-Splitter*, to obviate this difficulty. It makes a smooth, clear cut, through the bark and wood together, without splitting the surface, and besides being more expeditious, forms a more perfect fit between the two united parts. This implement is highly commended by the editor of the



Stock-Splitter—Fig. 17.

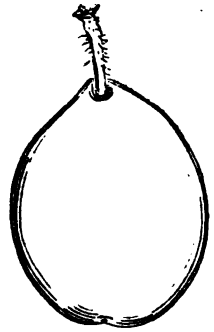
Horticulturist; and the writer can also add his testimony in its favor, having for many years used one of precisely similar operation, but of much simpler construction, and which was figured and described in the Fruit Culturist. As it appears never to have been much used, we append a figure and description for the benefit of our readers. The thin cutting blade A, is about two and a half inches long, set back at an angle of a hundred and twenty degrees with the shaft and handle B, which moves it as a lever, in cutting; and when shut, reaches the concave bed or groove, sheathed with leather, in the wooden piece, C. These two pieces, with the connecting pivot, constitute the whole implement. The angle which the blade forms with the handles, causes an oblique or *sawing* motion to the edge of the blade, which renders it far more effective in cutting, than the one described in the Horticulturist, where the blade acts directly, not obliquely, by means of a lever and wheel. This tool is used in cutting off the heads of the stocks, preparatory to grafting, as well as in forming the slit of the graft; and the quickness and ease with which a tree an inch or more in diameter is severed at one stroke at right angles, is astonishing to one who first tries it—a slight pressure with the left hand against the top of the tree being given at the same time. A blacksmith will make the blade in half an hour, and another hour's work will complete the implement. The writer has used one extensively for a dozen years, and it will apparently last as much longer, without any repair.

Early Fruits.

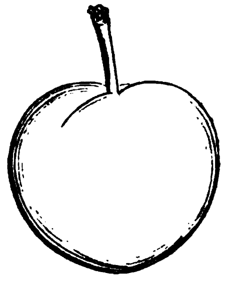
The Primordian and Cherry Plums.—The value of very early fruit is indicated by the eagerness with which the first ripening specimens are plucked from the early trees, or the high prices which such fruit always commands in market. A variety, even if second or third-rate in quality, becomes desirable, if but a few days in advance of all other sorts. There are, we believe, no plums which nearly approach in early maturity the two we have here figured.

The White Primordian, *Jaune Hative, or Early Yellow*, appears to have been much underrated, or at any rate, its merits entitle it to a far more extensive cultivation. It appears to be the earliest known variety; its quality is good, certainly equal to some later ones, whose large size and showy appearance have given them a high reputation; and it is a most abundant bearer. The tree is of slender and slow growth, and of rather difficult propagation, which is perhaps one reason it is rarely to be found in nurseries.* With this exception, it appears to be quite superior to the Cherry plum—it greatly excels it in productiveness. Fully grown trees are usually loaded with as heavy a crop as the branches can bear.

The fruit is small, the figure indicating the size of an average specimen, somewhat obovate, slightly marked, surface smooth, greenish yellow at first, becoming a fine clear yellow when fully ripe; stalk half an inch long, slender, downy, in a very narrow rather deep cavity; flesh yellow, moderately juicy, delicate in texture, of a very pleasant sweet (no acidity) but not high flavor; stone small, parting freely from the flesh. Branches slender, quite downy. It ripens at or a little before the usual time of wheat harvest, or in the early part of 7 mo. (July.)



Primordian.



Cherry Plum.

The Cherry Plum, *Early Scarlet, or Myrobolan*, is rather smaller than the Primordian, and just perceptibly later; the tree is a freer grower, and the fruit more showy, but in all other particulars it is inferior. It is nearly round, color bright red, flesh greenish yellow, very juicy, rather coarser in texture than the Primordian, subacid, pleasant flavor, but not rich. It ripens during the latter part of wheat harvesting. Under ordinary management, it is so poor a bearer as to be scarcely worth cultivating, even by the amateur; but we are informed in the Horticulturist, that Samuel Reeve, of New-Jersey, raises abundant crops every year, by retarding the luxuriant growth of the tree by transplanting them every five or six years; and hence root-pruning is recommended for the same purpose. There are some doubts, however, whether over-luxuriance is always the cause of its sterility, as old trees, growing in western New-York, as they advanced in age and decreased in thrifty growth, still remained nearly barren.

Profits of Orchards.

The past season has been remarkable for the inequality of the apple crop; for while in some parts of the country it has been a total failure, in others, orchards have been uncommonly productive. Perhaps no where have they yielded more abundantly than in the western part of Wayne County, New-York, and the adjacent region. The following are not extraordinary examples, and all occurring within about one mile of the residence of the writer. On one farm, one acre of ground is occupied chiefly with large trees of the Rhode Island Greening. The product was two hundred barrels, after reserving a sufficient quantity for domestic use. The price was sixty-two and a-half cents per barrel, and the aggregate amount one hundred and twenty-five dollars. Deducting twenty-five dollars for picking and carting to market on the Erie canal, which is more than the actual cost, we have one hundred dollars the nett proceeds of a single acre. It would require but a small farm, at this rate, to yield a greater revenue, than the salary of the Governor of the State.

On another farm, half a mile distant, there are four and a-half acres of orchard, with vacancies nearly equal to one acre. The proprietor sold six hundred and fifty barrels, for four hundred and six dollars, besides reserving a supply for his own use; which is very near the amount per acre in the former instance. In this orchard, one tree of the Rhode Island Greening, bore forty bushels; and two neighbors had each a tree of the same variety, the crop from each exceeding forty bushels, or ten dollars per tree.

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* It may be possible that this plum does not succeed so well in other places as in Western New-York, to which these remarks apply.

Such profitable returns have caused a great variety of new orchards to be set out, in addition to many within a year or two past. But the market will not be soon glutted; for while a few only keep their newly planted orchards well manured, cultivated, the soil mellow, and the earth round the trees entirely free from grass, weeds, or any sown crop; the great majority plant out their trees in meadows, pastures or grain fields, to be overrun with grass and weeds. A hill of corn thus treated would produce nothing; and the young trees, (which require as good treatment as corn,) make but little growth, if indeed they happen to live through the treatment they receive. Thus, instead of yielding a profitable return, as they might do in five years, they are not likely to bear much in less than fifteen or twenty. It is true that many who pursue this course, are not aware of the disadvantages under which they are working; although they expend twenty-five or thirty dollars for trees, they "can't any how afford" to take an agricultural or horticultural paper, which would show them a better way. This is, emphatically, wasting at the bung, in order to save at the tap.

White-wash on Fruit Trees.

A. J. Downing and others, have given it as their opinion, that an injurious effect is produced on fruit trees by the sun's rays, when they strike the body and limbs with direct force, while the sap is frozen, or when there are sudden changes from cloud to sunshine. The writer has not had sufficient opportunity for comparison to form a positive opinion in the case; but as it has been suggested that the application of white-wash to trees, would have the effect to refract the rays of the sun, and thus prevent the heat being communicated to the trunk and branches, it is proper to notice any experiments which have a bearing on the subject.

In the January number of the *Horticulturist*, the editor states that he took two thermometers, which agreed perfectly; and to the bulb of one of them he applied a thick coating of white-wash and allowed it to become dry; the other was left as usual. The result is given as follows:

"After being exposed for an hour to the full sunshine, the naked thermometer indicated 97°—the thermometer with the white-washed bulb only 79°—being a difference of 18°."

The Columbia Pear.

Will you or some of your readers give through the *Cultivator*, the history of the Columbia or Columbian Virgalieu pear?—its history, good qualities, size and time of ripening. Also why it is, that when we have such pears as the Dix, Marie Louise, Dunmore, &c. we so rarely see their names in the list of the *best*. I am well aware that the largest is not always the best, but I should think they ought to take the preference when they are equal in flavor and productiveness.

Thos. R. Peck.

West Bloomfield, Ontario Co., N. Y.

A. J. Downing, in his *Fruits and Fruit Trees*, says of the Columbia—"This splendid American pear is one of the most excellent qualities, and will we think, become more generally popular than any other early winter fruit. It is large, handsome, very productive, and has a rich, sugary flavor, resembling, but often surpassing, that of the Beurrè Diel. The original tree grows on the farm of Mr. Casser, in Westchester county, 13 miles from New-York." It is spoken of as very productive. It is described in the work above referred to as follows:

"Fruit large, regularly formed, obovate, usually a little oblong, and always broadest in the middle. Skin smooth and fair, pale green in the autumn, but when ripe, of a fine golden yellow, with occasionally a soft orange tinge on its cheek, and dotted with small gray dots. Stalk more than an inch long, slender, slightly curved, placed towards one side of the narrow depression. Calyx of medium size, partially open, set in a very shallow basin. Flesh white, not very fine grained, but melting, juicy, with a sweet, rich and excellent, aromatic flavor. November to January."

Select Varieties of Fruit.

In the November number of the Horticulturist, the editor gives the following lists of fruits, "unimpeachably good in all soils"—"which have won a *large vote* by their uniformity of character:"

Apples—9 *varieties.*

Early Harvest,
Early Strawberry,
Williams' Favorite,
Gravenstein,
Porter,
Baldwin,
Ladies' Sweeting,
Rhode Island Greening,
Roxbury Russet.

Pears—9 *varieties.*

Bartlett,
Beurre Bosc,
Dix,
Fondante d'Automne,
Gray Doyenne,
Louise Bonne de Jersey,
Seckel,
Beurre d'Aremberg,
Winter Nelis.

Plums—8 *varieties.*

Bleecker's Gage,
Coe's Golden Drop,
Diapree Rouge,
Green Gage,
Jefferson,
Lawrence's Favorite,
Smith's Orleans,
Purple Favorite.

Cherries—8 *varieties.*

Bauman's May,
Black Tartarian,
Black Eagle,
Downer's Late,
Downton,
Bigarreau,
Elton,
Mayduke.

Peaches—8 *varieties.*

Early York,
George IV,
Grosse Mignonne,
Coolidge's Favorite.
Bergen's Yellow,
Royal George,
Oldmixon Freestone,
Large White Cling.

Apricots—Moorpark, Breda.
Nectarines—Elruge, Early Violet.

We believe the preceding list to be nearly as perfect as can be furnished with the present amount of experience in this country. Such fine varieties as the Newtown pippin, Fall pippin, and the White Doyenné pear, are rejected because they do not succeed *universally*. Perhaps further trial will compel the rejection on the same grounds of one or two others; the Gray Doyenné, for instance, although succeeding well in the Eastern States and England, cracks badly at Cleaveland in Ohio, according to Dr. Kirtland and F. R. Elliott; and the Baldwin apple grown at Cleaveland, we are also informed is affected with bitter rot. A more extensive trial of the Jefferson plum throughout this country, would more perfectly settle its claim to uniform excellence. This select list, however, is unquestionably the best which has yet appeared.

White Black-berry.

J. H. Young, of Brunswick, Pa., sends the following account of a white black-berry he has found. We have heard of a similar fruit in several localities, one of which is Stephentown, Rensselaer Co., N. Y.

"If I am not mistaken, I have discovered a *new berry*. I have inquired and searched extensively, and have found nothing like it. It is a *white black-berry!* I propose to name it the *white-berry*. The bush resembles the common black-berry, *Rubus villosus*; but the berry is larger and sweeter, and when fully ripe has the color of the white rasp-berry. It *tastes* like the black-berry, only "*much more so*,"—as the man said of the cauliflower, when comparing it with cabbage. If this species of berry has been described by naturalists, please inform your readers accordingly. I forbear a more particular description until I shall have ascertained that fact. It may turn out at last to be well known in some other localities, and to have been noticed by botanists under a name not familiar to me."

NEW-YORK STATE AGRICULTURAL SOCIETY.

The annual meeting of this Society was held in this city on the 19th and 20th of last month. The session was commenced at the Assembly Chamber at 12 o'clock on the 19th—the President of the Society, Geo. Vail, Esq. in the Chair, and Benj. P. Johnson, Esq. Secretary.

After the meeting was organized, and an opportunity offered to all who desired, to become members of the Society, Mr. Johnson read the annual report of the Executive Committee, detailing their labors for the past year, which was accepted, and approved.

Mr. J. M'D. M'Intyre, the treasurer, then read his annual report. The following balance sheet shows the condition of the financial affairs of the society:—

Balance from last report and receipts from various sources during the year,		$6,457 19
Disbursements during the year:—		
Premiums paid,	$2,266 73	
Incidental expenses,	514 78	
Library,	61 22	
Salaries,	947 27	
Expenses, 1846,	312 88	
Other expenses,	547 75	
Invested 1st Oct. last,	1,000 00	
		5.650 63
Balance on hand,		806 56
		$6 457 19

The President stated that the permanent fund of the society now amounted to $8,000.

Mr. L. F. Allen, of Black Rock, said, it would be recollected that at the last annual meeting, he had submitted an amendment to the constitution of the society, rendered necessary by the change in the constitution of the State. He moved to substitute *judicial* districts instead of *Senate* districts, as it now read.—It was a mere matter of form. The amendment was agreed to.

Mr. T. Smith, of Schoharie, offered a resolution providing that a committee of three from each judicial district, be selected by the members from each district, to report the names of officers for the ensuing year, and to recommend the place of holding the next fair.

Mr. Geddes, of Onondaga, gave notice that at the next annual meeting of the society, he would move an amendment to the constitution, so as to exclude the ex-presidents of the society from the executive committee, they having been added to the board by an amendment adopted last year.

Mr. G. W. Clinton, of Buffalo, said that he was instructed to present a resolution of the Common Council of that city, asking that the next annual Fair should be held at Buffalo. That city had waited patiently and properly, until every other section of the state had been visited—until they now supposed that their turn had come. The people of Buffalo were now strenuous and hearty in this matter, and full provision had been made by the citizens and the common council for the reception of the society, and the accommodation of the Fair; should it visit that place, and the Fair be held there, he would promise for them at least a good western welcome.

Mr. Viele, of Troy, moved the reference of the matter to the committee to be raised under Mr. T. Smith's resolution. Agreed to.

Mr. T. Smith, of Schoharie, presented a communication from citizens of Geneva, asking that the next Fair might be held at that place. It had the same reference as the other.

The following gentlemen were then announced as the committee of three from each judicial district:—

1. George E. Sickles, Robert G. Campbell, Ambrose Stevens, New-York.
2 Geo. B. Butler, Westchester; John E. Jones, Kings; Wessel S. Smith, Queens
3. E. P. Prentice, Albany; J. P. Beekman, Columbia; Amos Briggs, Rensselaer.
4. S Cheever, Saratoga; W. H. Butrick, Essex; J. T. Blanchard, Saratoga.
5. A. Z McCarthy, Oswego; George Geddes, Onondaga; B. M. Huntington, Oneida.
6. B. Enos, Madison; J. Bennett, Otsego; Geo. W. Buck, Chemung.
7. B F. Angel, Livingston; T. D. Burrill, Ontario; J. M. Sherwood, Cayuga.
8 A. T. Upham, T. Cary, J. T. Bush.

Mr. T. Smith laid on the table a resolution declaring that the interests of the society would be promoted by fixing a permanent location for future State Fairs after the next one.

Mr. L. F. Allen wished to make a report in part from the committee on fruits. This was acknowledged to be an important subject, and in addition to those reported last winter, he would recommend the following fruits as worthy of cultivation by the people:

Pears—*Summer*—Bloodgood, Madeleine, Dearborn's Seedling *Autumn*—Fondante d'Automne, Bartlett, Seckel, White Doyenne. Swan's Orange, Steven's Genesee, Louise Bonne d'Jersey, Beurre Bosc, Grey Doyenne. Washington *Winter*—Beurre d'Aremberg, Glout Morceau, Winter Nelis, Vicar of Winkfield.

Plums—Jefferson, Schenectady Catherine, Reine Claude, Columbia, Huling's Superb, Bleecker's Gage, Albany Beauty, Washington Bolmar, Prince's Imperial Gage, Coe's Golden Drop, Denniston's Red, Peach, Lawrence's Favorite, and Prune d'Agen, for prunes.

Cherries—Mayduke, Florence, Black Tartarian, Yellow Spanish. Holland Bigarreau, Elton, Downer's Late.

Peaches—Early Tillotson, George IV. Grosse Mignonne, Morris White, Royal George, Yellow Rareripe, Crawford's Early, Red Rareripe, Red Cheek Melocoton, Cooledge's Favorite, Malta, Brevort's Morris.

Strawberries—Early Scarlet, Hovey's Seedling, Swainstone's Seedling.

Mr. L. F. Allen laid on the table resolutions which he wished to have considered, after the address in the evening—proposing that the Smithsonian Institution at Washington should include agriculture among its objects—and also that Mt. Vernon should be purchased for an Agricultural Educational Institution.

Adjourned to 4 o'clock, P. M.

Four o'clock, P. M.

Mr. Angel, from the committee appointed for the purpose, reported the following list of officers for the ensuing year:—

For President—LEWIS F. ALLEN of Erie.

Vice Presidents—1st district, Ambrose Stevens; 2d, John A. King of Queens; 3d, E. P. Prentice of Albany; 4th, Samuel Cheever of Saratoga; 5th, George Geddes of Onondaga; 6th, George W. Buck of Chemung; 7th, Allen Ayrault of Livingston; 8th, James C. Ferris of Wyoming.

Rec. Secretary—Benj. P. Johnson of Albany

Cor. Secretary—Ebenezer Emmons of Albany.

Treasurer—John McD McIntyre of Albany.

Executive Committee—Luther Tucker of Albany, John J. Viele of Rensselaer. Joel Rathbone of Albany, John T. Bush of Erie, Theodore C Peters of Genesee.

The committee also recommended unanimously, that Buffalo be the place for holding the next annual Fair.

The report was accepted, and the persons named elected.

Adjourned to 7 o'clock, P. M.

At 7 o'clock, P. M., the society convened at the Assembly chamber to hear an address by Prof. J. P. Norton of Yale College. Mr. N. gave an admirable exposition of the connexion of science with practical agriculture. His illustrations were numerous and of so plain and simple a character as to be at once understood. He was listened to for upwards of an hour by a very large audience, whose satisfaction was evinced by the most profound attention. The address will probably be published.

On motion of Mr. J. A. **King** it was resolved, That the thanks of this Society be presented to Prof. **Norton** for his able and scientific Address, and that he be requested to furnish a copy of it for publication.

January 20, 1848.

The Society convened at its rooms in the old State Hall, at 10 o'clock, A. M., when the reports of the Committees on Premiums were read.

At 7 o'clock, P. M., the Society again convened at the Assembly Chamber, when Mr. **Johnson**, the Secretary, read the following abstract of the reports of the committees to award Premiums, as follows:

PREMIUMS.

On Farms.—1. John Delafield, Oakland, Seneca Co.,—$50. 2. Peter Crispel, jr., Hurley, Ulster Co.—$30. 3. James Pendil, Batavia, Genesee Co—$20. 4. Lucas V. V. Schuyler, Watervliet—set Transactions.

Draining.—H. D. Spoor, Troy—$10. E J. Woolsey, Long Island—Set Trans. E. C. Bliss, Westfield. Chautauque—Trans 1846.

Farm Buildings—*Dwelling*—Mrs. Sanford Howard, Albany—$20. *Piggery*—S. W. Jewett, Weybridge, Vt.—$10.

Cheese Dairies.—Alonzo L. Fish, Cedarville, Herkimer Co, statement of experiments, &c.—$50. Newberry Bronson, Warsaw, Wyoming Co—$20.

Butter Dairies.—B. A. Hall, New Lebanon, Columbia—$50.

Field Crops—*Spring Wheat.*—2. Robert Eells, Westmoreland, Oneida Co., 20½ bush. per acre—$8.

Indian Corn.—George Vail, Troy, 67 bush. per acre—$20.

Barley.—Benj. Enos, De Ruyter, Madison Co., 39 bush. per acre—$10.

Oats.—1. Charles W. Eells, Kirkland, Oneida Co., 86 bush. per acre—$10. 2. Benj. Enos, De Ruyter, 71 bush. per acre—$8.

Beans—E. C. Bliss, Westfield, 81½ bush per acre—$8.

Flax.—Wm. Newcomb, Pittstown, Rensselaer Co.—$5 E. C. Bliss, Westfield—Trans.

Root Crops—*Potatoes*—1 Daniel Newcomb, Pittstown, Rensselaer Co., 405 bush per acre—$10. 2. Martin Springer, Brunswick, Rens. Co, 369 bush. per acre—$8.

Ruta Bagas.—1. Joseph Hastings, Brunswick, Rens. Co., 1,317 bush. per acre—$10.

Carrots.—1. Wm. Risley, Fredonia, Chautauque Co., 557 bush. on half an acre—$8.

Experiments.—W. D. Osborn, Port Byron, Cayuga Co., on 3 acres planted with corn, 1846—$20. 1st acre, manured with 10 cords barnyard manure before corn—no manure on any part this year—Oats, 1847, 90½ bush per acre 2d acre, 1846, Corn, without manure—Oats, 1847, 88½ bush. per acre 3d acre, manured with 8 cords of manure and 4 loads of muck, 1846—Oats, 1847, 112 bush. per acre.

Fruits.—Charles Lee, Penn Yan, Yates Co., 2d premium for a Seedling winter apple, "Wagener Apple"—$5, and Downing's common edition of "Fruits and Fruit Trees."

The Committee also remark, that two Seedling winter apples were presented to the Committee—one called the "Middle Apple," from Herkimer, Herkimer County, and the other produced from the seed of the Newtown Pippin, in Albany County, without a name; but as no description of the growth and habits of the trees, according to the regulations of the Society, were produced, they postponed the further consideration of those fruits until the next annual meeting, and request the producers of these fruits to transmit to the Committee the natural history and character of the trees producing said fruits.

After the reading of the above, the President of the Society, Mr. **Vail**, delivered his valedictory address, which presented a flattering and encouraging view of the progress of the Society during past years, and of its prospects for the future. A unanimous vote of thanks was presented to Mr. **Vail**, and a copy of the address solicited for the use of the Society.

On concluding his remarks, Mr. **Vail** introduced the President elect, Mr. **Allen**, who in a brief an appropriate speech, returned thanks to the Society, and signified his acceptance of the office.

Mr. **Burchard** offered some resolutions in relation to the importance of education to the farmer, and expressive of the advantage which would result by the establishment of Agricultural Schools in connexion with Experimental Farms, which were unanimously adopted. The Society then adjourned.

January 21, 1848.

The Executive Committee met at the rooms of the Society at 10 o'clock—the President L. F. **Allen**, Esq., in the chair. Present: Messrs. Sherwood, Vail, Prentice, Johnson. Viele, Tucker, Stevens, Ayrault, King, McIntyre, Emmons, Rathbone, and several gentlemen from different parts of the State.

A committee of gentlemen from Buffalo, having given the usual guarantee that the expenses attendant on holding the next Annual Exhibition should be paid by the citizens of Buffalo, it was, on motion of Mr. **Sherwood**,

Resolved, That the next Fair and Cattle Show of the New-York State Ag. Society, be held at the city of **Buffalo**, on the 12th, 13th and 14th days of September next.

The Executive Committee were occupied during the day, in the preparation of the Prize List, which we hope to be able to present, complete, to our readers next month.

County Agricultural Societies.

Queens Co. Agricultural Society.—The annual meeting of this society was held on the 24th Dec.

The first premium for corn was awarded to Timothy Nostrand, Jamaica, for 112 busheles shelled corn per acre, raised at a cost of $13.25.

The first premium for turneps to Wm. Ketcham, Jericho, for 628 bushels, at a cost of $33.96, leaving a profit after deducting charges, including cost of taking to market, $173.70 per acre.

Resolutions in favor of Legislative aid being continued, were unanimously adopted.

John A. King was elected president, and Albert G. Carll, secretary. Communications intended for the society, should be addressed to the secretary at Jericho.

Jefferson County Ag. Society.—This enterprising society has, we learn, elected for its officers the present year, the following gentlemen:—**Willard Ives**, Watertown, President; E. S. **Massey**, Secretary; **John C. Sterling**, Corresponding Secretary; C. V. **Brainerd**, Treasurer.

Cortdand Co. Ag. Society.—The following gentlemen were appointed officers of the above named Society for the ensuing year, at its late annual meeting: **James S. Leach**, President; **Harvy Woolston**, **Morris Miller**, **Peter Walrod**, **Martin Sanders**, Vice Presidents; Noah Hitchcock, jr., Treasurer; Henry S. Randall, Rec. Secretary; Amos Herbert, Cor. Secretary; O. M. Shedd, A. L. Chamberlain, Manly Hobert, Hiram Hopkins, James A. Rogers, S. D. Freer, Moses Kinney, Daniel Rowley, Ira Bowen, Selden D. Munger, Executive Committee; F. H. Hibbard, Marshal. The next fair will be held in Cortland Village.

Saint John Agricultural and Horticultural Society.—We have received a copy of the Annual Report of the Directors of the Saint John (New Brunswick) Ag. Society. It does not appear, from the report, that agriculture is in a very flourishing condition in the Province; but from the active measures which the Society is taking, we are led to expect a turn in favor of its improvement at no distant day. The Directors show, plainly, that farming may be made a profitable business in that section.

Good Farming in Virginia.—Retired public men sometimes succeed quite as well at farming as they do in managing public affairs. A writer in the *National Standard* says that John Tyler had 200 acres of wheat the past season, on a field which three years ago when he moved on, would not produce more than the seed. This year it had twenty bushels per acre. Marl and manure caused the difference.

THE FARMER'S NOTE BOOK.

Unenclosed Lands.

MESSRS. EDITORS—In the December number of the Cultivator, you allude to the fact that along the valley of the Connecticut, in Massachusetts, " there are large portions of territory unenclosed, yet there are thousands of acres under cultivation," &c.

Now we are proud to have such a paragraph as the one above cited and those that follow it, written of Massachusetts; for it is to the honor of any State to have such things said of them, and most certainly very much to the comfort of the population to have them exist; for within the last week an intelligent man has remarked, that it was " worth ten dollars a year to any farmer to have the streets keep clear of animals." Another, who has been proprietor of a small farm since 1842, says that this public guardianship has been worth more than $100 to him in the six intervening seasons.

But let us look at the contrast which a few years have effected in this matter in our ancient, and in some things we hope wise, Commonwealth. Previous to the revision of the statutes of 1836, by the law it was left discretionary with towns to say at their annual meeting, whether " swine and neat cattle should be permitted to run at large under certain restrictions." Very naturally, every town adopted the course which their supposed interest and inclination prompted. In many places, especially in the western part of the state, the usual course was to let them ramble at discretion.

The consequences were, that our streets were so commonly plowed by the long-nosed swine of those days, once at least in a season, that large crops of various unsightly weeds sprung up along the wayside to illustrate the beauty of the thorns and thistles overgrowing the vineyard of the man void of understanding. Large herds of cattle were seen rambling in every direction. These, one might suppose from their general movements, were acting in the capacity of *fence viewers*, for unless barriers were erected between the highway and the adjoining crops, almost high enough for the walls of a fortified city, they were sure to find the discrepancy, which they took for an invitation to " walk in," and partake, in such quantities as their voracious appetites demanded, of the good man's labor. Oh! what vexations arose when these pilferers, licensed by owners who had forgotten the law of love for their neighbors, and the law of right in their dealings with their fellow men, had broken into the meadows, and were perhaps trampling down the cornfield whose luxuriant growth had promised a bountiful harvest, or, perhaps, wading through wheat ready for the sickle, and which, but for lowering skies, might then have been in the reaper's hands, instead of being garnered into the capacious stomachs of the wandering, starved, sacrilegious herd of trespassers, sent out to the daily task of highway robbery. Then, what care was necessary, that every gate and bar should be kept shut, for as sure as they were left for a moment unsecure, a host of quadruped Philistines were ready to enter in and spoil the land. It was not strange in such a state of things, with every temptation before them, that could be offered to educate them in wrong, driven by starving necessity one day, and invited by sumptuous prospects another, that cattle became unruly in their propensities, and ungoverned in their habits, or that they were induced to wander off, frequently to the annoyance of their owners, and sometimes as if to give a lesson of instruction, a total loss to them. But there were further evils, which are not wholly unimportant, attending this loose and illiberal state of things. If any one was so fortunate as to have a watering place by the wayside, near his residence, he was sure to receive a double portion of the visits of congregated groups of thirsty animals on a warm summer's day; and then wo to his crops, however lofty the barriers that separated them from the " long pasture," herded by a whole community. Perhaps a shade tree threw its spreading arms from his premises (it may be from his door yard, and around his front gate) over the highway. Under a cluster of such trees we found they were sure to make their nooning, and the appearance of the soft sward, and the effluvia round about, we leave others to imagine rather than describe.

The convention that revised our statutes in 1836, saw these evils, and perfected a plan for their remedy; and we have no doubt that the benefits of the single enactment relative to prohibiting animals from running at large in the highways and on unenclosed lands, have already been sufficient to defray the expenses of their whole session, and yet the first fruits of their labor are hardly beginning to be enjoyed. They gave us a statute expressly in this matter, and which cannot be mistaken in its import. In its first application it runs thus:—" The field drivers *shall* take up at any time, all sheep, hogs, horses, or neat cattle found going at large and without a keeper, in the highways or on unimproved lands;" and the field driver is sworn like other officers to the faithful discharge of his duty. So it will be seen there is no ground to parley in the matter, no discretionary power. If a field driver does not construe the law in its plain and simple meaning, it implies at once that he is blinded by prejudice, or led astray by mistaken motives.

After the liberal construction and discretionary power given by the former law, it was in no way strange that one so stringent in its application as the present, should find opposition in every community. This was truly the case we believe, more or less, in every section of the Commonwealth. In some places severe threats were given, in case men did their duty, when they had solemnly sworn to do it. In some, it may be, summary acts were committed on the property of such individuals who dared to do as the law of the land said they must do or perjure themselves before high heaven, and become guilty and untrustworthy in the sight of their fellow men.

But the progress of the matter has been onward, and as you have lately had an opportunity to witness, its triumphs in some places have been complete. In others it is approaching that desirable position, and in all, even our most " secluded nooks and corners," it augurs well of its triumph. " Public opinion," that tribunal which will scarcely allow an appeal from its decisions, is growing stronger and stronger in its approval of the letter of the law, and individual prejudice, which is so prone to take root in the unbroken ground of self-interest, is yielding in its favor as a means of accomplishing its own ends. As you truly related, the state of things in our Commonwealth is essentially improved by the existence of this law. The farmer can now retire at night with the reflection that his crops are safe from highway depredators of all classes, except lawless bipeds, which no fences can stop, and law seldom restrain. He can plant trees along the wayside, and sit quietly and comfortably under the shadows of them—if convenience require, he can have half a dozen gates or bars open through the day, in the business of the farm, and no annoyance near—he can *drive* his own animals without inconvenience from those who have no driver—woman and little children can walk the streets quietly and safely without danger from wild, disorderly animals—the waysides, unless used for plowed crops, exhibit a gay, vernal appearance, and when newly mowed present a lovely sight. In fact *countless* benefits attend this improved state of things, and not a solitary wrong thing in the whole matter. Wise are the legislators who enact such good and wholesome laws for the preservation of our rights and safety. Public benefactors are the men who come boldly out and sustain them in their early adoption; and "happy are the people" who live under their salutary influence. May a similar condition to that which Massachusetts is now approaching, and which she is ultimately to attain through all her borders in these matters, be speedily realized all over the nation, and through the world. William Bacon.

Richmond, Jan., 1848.

Farmer's Clubs.

We are pleased to learn that a Farmer's Club has been formed in Clinton, Oneida county, N. Y. We have received a communication from a correspondent in reference to this association from which we give the following. We would refer our correspondent to an article on Farmer's Clubs in our last volume, page 62.—Eds.

We are engaged in a new subject, and have no one that has had any experiece in such associations; and we are therefore in doubt as to what course to pursue to bring out the talent and experience of the several members of our club. On one point I believe there is but one opinion, that is we want facts, and the experience of the practical portion of our community, rather than mere speculations. The question is, How can this knowledge be drawn out, and made useful to ourselves and others? And what measures can we adopt to not only keep up, but to increase the interest now manifest among us? In large places I am aware that by means of shows, public lectures, and large pecuniary resources, it is not so difficult to do this; but are not these associations as much, or perhaps more needed, in smaller places than in larger ones; and cannot you, or some of your correspondents, suggest some course of action that will best secure the objects aimed at, in the constitution of our society? Agricola.

Coal Ashes—Compost for Corn.

I have been experimenting in the use of *coal ashes* for potatoes. On half an acre I put nothing but such ashes; on an acre adjoining was spread a good coating of well rotted horse manure; and on another half acre adjoining both the preceding, nothing. Soil, a sandy loam. I found the coal ashes fully equal to the horse manure, the potatoes being very fine for the season. Where there was nothing, the yield was about *one half* what it was on the other portions,—both in quantity and size. I planted half a row with *diseased* potatoes, not a single sound one among them; but in the product I have not yet found the first diseased tuber.

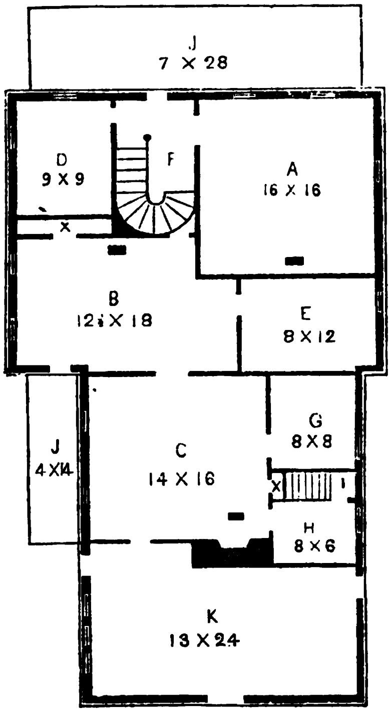
The following was my compost for corn, during the past season:—forty bushels of pigeon dung; forty bushels of hog dung, well-rotted, from beneath an old pen; ten bushels of plaster; and five of unleached ashes. A common handful was put in each hill. The corn was earlier by two weeks, larger ears, better filled, and more of them, but less fodder, than where I put fifteen large two-horse loads of barn-yard manure to the acre. The whole crop was in the same field, and the soil and tillage were alike in both parcels.

Brunswick, Col. Co, Pa. J. H. Young.

Plan of a Farm House.

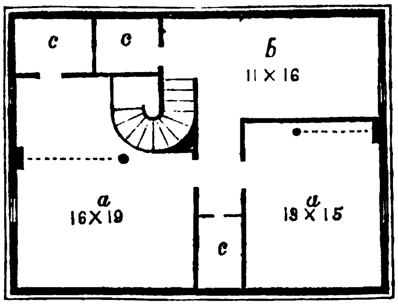
Editors Cultivator—I transmit for your disposal the annexed plan of a dwelling, lately erected by myself, and which, in consideration of size—32 × 24, and 28 × 24, including wood house, I find conveniently arranged for family purposes.

The building is of wood, lined with brick; the front, or main part, has 15 ft. posts, the lower rooms 10 ft. high, and the chambers finished to the rafters till 7½ ft. in height. The back, or kitchen part, has 10 ft. posts, consequently no room above except a garret for rubbish.



First Floor—Fig. 20.

A, parlor; B, dining room; C, kitchen; D, bed-room, finished to correspond with A; E, bed-room, finished to correspond with B; F, hall, in which is a circular stairway that occupies only 2½ × 3 ft. space—under the highest side is the passage to the dining room, and the lower side admits under it a quadrant shaped hat stand, as shown by the fine lines; G, kitchen bed-room; H, pantry; I, cellar stairway; J, piazzas; K, wood house; ▬, stoves; X. cupboards; O, false windows outside.



Second Floor—Fig. 21.

a, sleeping rooms warmed by the pipes that pass through the floor from the stoves below, and extend to the chimnies; the chiminies resting upon plank cupboards 5 ft. high: *b*, upper hall; *c*, closets.

Persons should conform their plan of building to the site occupied. The house here described fronts two roads, the one 8, the other about 75 rods distant; at a glance it is seen which sides should front the respective roads; therefore a plan adapted for one situation, is not for all. N. B. V. *Cayuga co., Jan.* 1, 1848.

Age of Cattle by their Teeth and Horns.

Some years ago, a gentleman presented at the cattle fair at Paris, Ky., a bull, as a two year old. The rules of this fair allow an animal to be presented as a two year old, until he is three; the fractions of a year not being counted; and this bull was nearly three by the certificate presented with him.

One of the judges, who had Youatts' Treatise upon British Cattle, contended that he was four years old, and that there must be some mistake or fraud somewhere.

The above circumstance induced me to examine a number of the cattle whose ages I knew; and the result was, that Durham cattle have their teeth much sooner than the ages specified in Youatt's Treatise. I examined none that were not six months for each year in advance of those marks. The two year old, would have the marks of three, and so of other ages. These cattle had all been well fed, and were large for their ages.

It is natural to suppose that cattle that come early to maturity, would cut their teeth sooner than those of slow growth, and this is found to be the fact.

Buffon says that cattle have a full mouth at three, Parkinson at four, and Youatt at five years old. There are other authorities for each of those periods, so that it is reasonable to suppose the observations of those persons were made upon different kinds of cattle. Good keep will make cattle look younger than they really are when judged by the horns, and older by the teeth. Poor keep will increase the rings on the horns and retard the cutting of the teeth. If an animal gets *very poor* the first winter, and is kept badly afterward, he will always have the marks on his horns of being two years older than his real age. If a cow has a calf at two years old, she will always show marks on her horns of greater age than if she had not bred early. Samuel D. Marvin. *Colbyville, Ky. Jan'y* 1st.

Ravages of the Fly in Wheat.

There is one point upon which I do not recollect to have seen much written since I have been a subscriber to the *Cultivator;* that is, whether any remedy can be adopted to prevent the ravages of the *fly* in wheat in the fall. It has worked very bad this last fall, in that part of the State in which I reside; and my object in referring to the matter is to elicit information on the subject. If there is any known remedy, my own experience and that of my neighbors is, that where a top dressing of manure was applied previous to plowing the last time, they did not appear to injure it. Well, that would be a good enough preventive, if a sufficient quantity of manure of the right kind, or in the right state, could be obtained.

Wheat is the staple article with us, and any thing that will promote the successful raising of it, is what we need. It is the opinion of some of us, that the nit or egg of the insect is in the grain when sown. The principal reason assigned for that opinion, is the fact that the maggot begins to eat at the berry or grain, which in many cases is three inches under the ground; and it would seem that where a field has been rolled, it would be difficult for the fly to get down to the root to deposite the egg, or for the maggot to crawl down. In fact they are found at the root, or rather just above, when in the nit or egg state. Any thing published in the *Cultivator*, touching their case, may prove a benefit to this region of the country. Samuel Atherton. *Peru, Huron County, Ohio, Dec.* 14, 1847.

The opinion that the Hessian fly is deposited in the grain, we have good reason to believe is erroneous; if any insect has been found preying on the grain itself, we presume it was not the Hessian fly in any of its stages. The history of the fly is well known. The egg is deposited in the furrows of the upper side of the leaf of the wheat, near the ground. They hatch in a few days, and the larva crawl down into the sheath, and live on the juices of the plant. One generation of the insect is usually hatched in the fall, and another in spring. The eggs of that produced in the fall, are laid when the wheat is but a few inches high. When it is discovered that the wheat is attacked, it has been practiced in some instances, with good results, to feed down the crop closely with sheep, or other light stock. Dr. Fitch, in his excellent essay on this insect, recommends this course, and also suggests that a heavy roller passed over the wheat, might crush or dislodge many of the eggs and larva. He says "one or the other of the same measures should also be resorted to in the spring, if the same contingency occurs; or if the worms are, at a later date, discovered to be numerous at the first and second joints of the young stalks, the experiment may be tried of mowing as closely as possible, the most infested portion of the field." The operation of the manure, in preventing the ravages of the fly, we suppose to be simply that it produces a more vigorous growth of the wheat, causing it to tiller out faster than the insects destroy the stalks. Every one may have noticed that wheat on rich ground, tillers out much more than on poor land; on this account, or for the reason that it is sometimes too thick, on rich land, it is a common observation that the fly is no injury to wheat in such cases, but on the contrary may be an advantage by preventing it from being too thick.

Culture and Preparation of Sumac.

Being somewhat acquainted with the article of sumac, I am inclined to say a few words on the use and cultivation of it,—especially as the subject has been introduced by your correspondent "Zea."

Sumac was last fall, very high. Sicily being from $90 to $100, and American from $40 to $50 per ton.

I have been a manufacturer of Morocco, &c., for twenty years, and have bought from twenty to thirty tons of American sumac, and more than that of the Sicily, yearly.

The American is cured as follows: when the leaves have got their growth, which is from July to August, it is cut and cured as green as possible. The best way, if you have room in buildings, is to lay it round in them so as to dry. If it is too thick it will heat; it must be turned every day till dry; then thrashed and all the stems taken out, and nothing but the leaves taken to market. But if it is to be ground, the leaves and small stems are all ground together.

There are several kinds of sumac in this country, only one of which is used in tanning. It has a deep green leaf and a smooth reddish stem, and bears a deep red berry. There is another kind that is often gathered, but it is of little use, possessing very little tanning substance.

I think the Sicily sumac is another kind—it is a great deal stronger than ours. I have no doubt it might be cultivated here and made a profitable crop, as it will grow on poor land. The seed may be sown broadcast, but thin, and the crop mowed when it is full grown. It should be cut before the leaves turn red.

As I have become a farmer, I think I shall sow some in the spring, and see whether it can be made a pofitable crop. The chief advantage from the use of sumac in tanning, is that it makes the leather of a lighter color. THOS GUEST.

Trenton Falls, New Jersey, January, 1848.

Origin of the Narragansett Horses.

EDS. CULTIVATOR—The following extract from Updike's "History of the Church in Narragansett;" a work which incidentally speaks of other things not relating to the church, furnishes, probably, the best account of the origin, decline and extinction of the famous Narragansett saddle-horses, that can anywhere be found. JAMES A. CHARLTON.

East Windsor Hill, Ct., Dec. 27, 1847.

"Mr. J. P. Hazard, in a communication to the author says:

'My grandfather, Gov. Robinson, introduced the famous saddle-horse, the Narragansett pacer, known in the last century over all the civilized part of North America and the West Indies, from whence they have lately been introduced into England as a saddle-horse for ladies, under the name of the Spanish Jennette.

'Gov. Robinson imported the original from Andalusia, in Spain, and the raising them for the West India markets was one of the objects of the early planters of this country.

'My Grandfather, Robert Hazard, raised one hundred annually, and often loaded two vessels a year with them and other products of his farm; which vessels sailed directly from the South Ferry to the West Indies, where the horses were in great demand.

'One cause of the loss of that famous breed here, was the great demand for them in Cuba, when that Island began to cultivate sugar extensively. The planters became rich, and wanted the pacing horses for themselves, and their wives or daughters to ride. They wanted them in greater numbers than we supplied them; and sent an agent to this country to purchase them on such terms as he could, but to purchase at all events. This agent never let a good one, that could be purchased, escape him.

'This, and the fact that they were not so well adapted to draught as other horses, was the cause of their being neglected, and I believe the breed is now extinct in this section.

'My father described the motion of this [kind] of horse as differing from others, in that its backbone moved through the air in a straight line, without inclining the rider from side to side, like the common racker or pacer of the present day. Hence the gait was very easy, and the horses being of great power and endurance, would perform a journey of one hunred miles a day, without injury to themselves or riders.'"

We are much obliged to Mr. CHARLTON for the trouble he has taken in procuring and forwarding the above facts in relation to the once celebrated Narragansett horses. We have never before been able to obstain a clue to their history.

The Andalusian horses of Spain were formerly held in high estimation. It is said they were carried into France many years ago, and that a cross from them produced the famous Norman breed, which is used in that country for stage-coaches, or "diligences." They were also carried, at an early day, into the Spanish settlements of South America and Mexico, and it is not improbable that the swift-footed "Canalos" of California, of which Col. FREMONT has given some account, (see last number of the Cultivator, page 31,) are descendants of the ancient Andalusian stock.

Col. CHAS. HAMILTON SMITH, in the "Naturalist's Library," thus speaks of the Andulasian horses: "The Andalusian horses are flexible, graceful and active, forming excellent manege or riding-school steeds, and very good chargers. They vary in color, but bays predominate, and next blacks and greys."

Of the South American stock, the same writer says:—"The South American horses are marked with most, if not all the characters of their Andalusian progenitors; they have their grace and good temper, and surpass them in speed, surety of foot, and bottom. Individuals taken on the Pampas have been known to carry a heavy man one hundred miles without drawing bit."

Of the Mexican branch of the family he says:—"The Mexican are known to be derived chiefly from Andalusian progenitors. * * They are a beautiful and sprightly race, of small stature and delicately formed, like roebucks, with handsome heads, the nose being slightly aquiline."

The origin of the fine breed of Andalusia is said to have been a mixture of the blood of the Barbs and Arabs from Africa, with the Spanish horses. During the occupancy of Spain by the Moors from the eighth to the sixteenth century, the horses from Africa were introduced in great numbers and mixed with the stock of the country. "This mixture," says Prof. Low, "was greatest in Andalusia and Grenada, and other kingdoms of the South, and there it is that the Spanish Jennette was formed and is still found with its pristine characters. These elegant little horses were greatly valued over Europe. They are stouter than the Barbs, but much of the same graceful and easy action. They are gentle and spirited, and capable of long and rapid journeys."

During the invasion of Spain by the French, the breeds of Spanish horses were much injured, and some of the best nearly ruined. In order to prevent the Spaniards from using the horses for cavalry purposes, it is said that Bonaparte's marshal issued an order to "disable, and blind the right eye of every serviceable horse in Andalusia."* The execution of this barbarous order, with the disasters incident to the French invasion, nearly deprived Spain of the noble race of horses for which she had long been celebrated.

Experiments—Lime and Plaster.

We are well pleased with the contents of the *Cultivator* in general; many of your correspondents furnish very interesting communications; but some of them, especially those detailing their experiments in farming, are so *indefinite* that they lose much of their value to the practical farmer. In order to derive much (if any) benefit from the experiments of others, we should know all the minutia of the operation, from its beginning to its end; for it frequently happens, that an apparently small error in repeating the process, will lead to a result entirely different to that which might have been anticipated.

We have observed one fact, relative to the use of *plaster and lime*, on the same soil at the same time, or shortly after each other. We have been using lime pretty freely for several years, and have repeatedly made experiments with plaster upon corn, for which the ground had been limed within from one to four years, and in no single instance was there the least perceptible advantage from the use of the plaster after the lime. The experiment was made by plastering several rows through the field, at a distance of from four to five rods from each other, and the result was uniformly the same—no difference in color, size or productiveness of those rows, over the rows intervening. How long this will be the case, and when gypsum will again be beneficial to the crops on land to which lime has been applied we are unable to say, as our experience in liming only extends to 1840. Perhaps you, or some of your correspondents, can tell us something about it. JOSEPH M. NESBIT. *Lewisburgh, Union Co. Pa. Jan.* 1, 1848.

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* Col. Chas. Hamilton Smith in *Naturalist's Library*.

Farmer's Town Associations.

EDITORS OF THE CULTIVATOR:—Quite a number of the farmers of my township, (Danville, Iowa,) have recently formed an Agricultural Association for the improvement of the "Soil and the mind;" and as this is the first association of the kind that has been formed in our State, I wish to put it upon record, believing that such associations will increase so rapidly in the next five years, that we will be astonished to find that there was but one in the winter of 1847. Let me respectfully recommend to the farmers of the West, such associations. Besides receiving much valuable information from the agricultural periodicals of the day, it is a very pleasant way of spending a winter evening once a week with our neighbors and friends, discussing the topics with which we are best acquainted, and most interested in. J. A. PINTO. *Hartford, Io.*

Iowa as an Agricultural State.

EDS. CULTIVATOR—I consider Iowa as first in point of natural advantages of any State in the Union for Agricultural purposes. Our prairie soil is a black vegetable mould, from one and a-half to three feet deep. The subsoil is a stiff clay. The Prairies are not generally over two to three miles in width, and the timber is good. There is, probably, about an equal proportion of prairie and timber.

We seldom or never have a failure in our corn crop, and vegetables of all kinds grow to an enormous size with little cultivation. Iowa is one of the best watered states in the Union for hydraulic purposes. Wheat some seasons is very abundant, but is frequently winter killed. I trust we shall find by close and practical observation, a remedy for this evil before many years. Corn being our staple production, it will naturally lead us to be a great pork-making people—and were we nearer the ultimate market for this great staple, or had we a direct railroad communication to the Atlantic states, in five years we would be second to no state in the production of pork.

We have made more fresh pork this season in Iowa, than our capitalists are able to purchase, and the difficulty of getting it to market, as well as the want of knowledge in regard to the number of hogs to be slaughtered in our state, has prevented eastern capital from finding its way here.

Consequently, the price is very low, and a majority of the farmers are packing their own pork. This should never be the case. Farmers can never put up their pork and send it to market as advantageously as men accustomed to that business. They should, and generally would be willing to sell at a fair price rather than have the trouble of packing and shipping for themselves.

I am astonished that more capital is not invested in our state in the growing of wool; from the experirince of all who have engaged in it, to any considerable extent, it has proved the adaptation of our soil and climate to this important branch of husbandry—and is found as lucrative as any other branch of agriculture. I am informed by a pretty extensive wool grower in my neighborhood from Washington County, Pa., that his sheep are not subject to many of the diseases here, that they were in Pa.

I do not think it probable that the eastern wool grower upon land worth $50 to $100 per acre, and hay worth $15 per ton, could successfully compete with the western, where land is worth $5 per acre, and hay $2.50 per ton.

We are only in the first year of our existence as a state, and the fourteenth as the inhabitant of a white man—still our population numbers between 150 and 200 thousand inhabitants, a great portion of them from the New England and Middle states; they are probably as well informed, and as industrious as the same number in any of our sister states; and all that we want to make us prosperous and happy, is the communication before spoken of with the east.

The health of Iowa, off the water courses, is as good as in any other state. On the water courses, we like all the west, are subject to fever and ague.

The ease with which we cultivate our prairie farms, would astonish our New England farmers. They would hardly believe that one man with a pair of horses, could cultivate forty-five acres of land in corn, and do it well; but this is not an uncommon occurrence.

We can raise 500 bushels of potatoes to the acre with no other work than to plow them twice or thrice, with the shovel plow after they are planted, that is, without the use of manure or hoe.

The shovel plow is the only tool used in the after culture of corn, and an average crop is from forty to sixty bushels per acre; besides, our corn fields are generally so well lined with pumpkins in the fall, that a man can walk on them all over his corn field.

I may add that I raised the last season 150 bushels of potatoes from two bushels, planted in one corner of my corn field, without manure or the use of the hoe. J. A. PINTO. *Hartford, Iowa, Dec.* 13, 1847.

Farm Buildings.

Every farmer is more or less interested in the construction of farm buildings; and I am glad to see the subject frequently alluded to in the *Cultivator*. Three essential requisites in a dwelling, are neatness, convenience and durability; and, as a general thing, the modern built houses possess these qualities in a greater degree than the unfinished "shells" of the last century. There is, however, often a failure in one respect, in modern buildings: the roof is frequently too flat; this may not be so great an objection, when it is composed of other materials than wood, but when made of wood it should always form an angle of *at least* thirty-five degrees.

As good shingles are becoming scarce in many places, various other materials are being substituted in their place, for covering certain out houses, where a rustic appearance is no objection. Sometimes boards and slabs are used. These make a tolerably tight roof, when sufficiently inclined, though not very durable; the dampness works in, and causes it to decay. A roof made in this way lasts only about 10 years.

A good roof may be made of sound well seasoned boards, about a foot wide and seven-eighths of an inch thick, laid crosswise the rafters, clapboard fashion.—This method requires the least possible quantity of lumber, and as the water wears across the grain of the wood, it is quite durable. The edges should be lapped over each other about an inch and a-half, and the ends about two inches. H. C. B., *Otsego Co.*, 1847.

Potatoes.

For the last two seasons I have planted my potatoes the last of May—had the ground plowed and furrowed the same as for corn. I take good, fair smooth potatoes and cut them lengthways, putting a quarter of a large, or half of a middling sized one in a hill. In this way I get large thrifty tops, which I consider necessary to insure large potatoes.

We cultivate with a three-shovel plow, working similar to a common cultivator; we hoe the potatoes to keep the weeds down, leaving the ground on a level, or but slightly raised about the hill. In digging, I find the potatoes near the stalks, and near the surface, which is the natural situation for them. Pink Eyes are apt to run out of a hill, and place themselves on the outside near the surface; but cultivated on a level they are found more compact about the stalks, and much time is saved in digging.

We in Illinois, bury many of our potatoes in the field. In the fall of 1846, I buried about forty bushels in one hole, ventilated at the top, until cold weather required the final covering necessary for winter. I had another hole, with about thirty bushels, covered without leaving any ventillator at the top, and but little earth over the straw; and a third hole, of about twenty bushels, covered with about eight inches of earth over the straw; all dug and put in within three days—the weather being warm and fine. A few days after, I was at one of my neighbors, and found them sorting over potatoes—the top of the heap being a rotten mass. The hole was covered about eighteen or twenty inches. I went home and examined heap No. 1, which was ventillated; it was dry, and potatoes all sound; No. 2, damp and swelling at the top; No. 3 was considerably rotten at the top of the heap.

I don't pretend that we can get the greatest quantity per acre, but I have obtained an excellent quality, and as good a yield as ever I had, planted in hills.

Dixon, Illinois, Dec. 24. 1847. N. WHITNEY.

Breeding Horses.

THE appearance of Mr. BURNET's communication in the January number of the Cultivator, seems to render it proper that I should endeavor to "define my position" in regard to a subject on which he thinks I have not been sufficiently explicit.

After Mr. B.'s remark, in the commencement of his article, that he had read my papers on Breeding Horses "*attentively*," it was not without surprise that I found he had entirely misunderstood me in relation to one of the most important points therein considered. Under the influence of this mistake, he supposes that I am "*privately* [?] inclined to take the breeds [of horses] we have already in our country—such as the Morgan, the Narragansett, the Canadian, perhaps, and the descendants of Messenger and Duroc, and breed them among themselves, to establish a sort of home-breed—a kind of 'horse of all work.'"

If Mr. B. will turn to the first number, and first paragraph, of my articles, (last vol. Cultivator, p. 169,) he will find it plainly stated that the object was to consider the "best mode of improving our horses for the carriage and road." By "carriage" was meant such a vehicle as is drawn by horses *on the road*, and perhaps the idea would have been better expressed by the question—How shall we produce the best *roadsters?* As this object, however, was thus set forth in the outset, and kept prominently in view through the whole series, I am at a loss to discover wherein I have given any grounds for the supposition that I am "*privately*," or otherwise, disposed to encourage the breeding of various stocks of horses "among themselves" for the purpose of producing a "kind of horse of all work."

In No. IV of my articles, (page 271, last vol. Cultivator,) it is said—"With regard to the best course for improving our horses for the carriage and road, the first object should be to preserve the best stocks now in the country. Such families as those above named, and others of value, should be bred with strict care, and sufficiently by themselves to ensure uniformity of character. It being the constant endeavor to breed them as much as possible to one standard or model, no blood should be admitted which would be likely to cause a deviation from it. This course should be pursued for many years, until the peculiar qualities of the stock become so fixed in the blood that they will be transmitted with a good degree of certainty."

Here it is, to be sure, advised to breed from stocks which "we have already in the country;" but it is by no means advised to "breed them among themselves" for the purpose of obtaining a "horse of all work;" on the contrary, it is recommended that the different stocks be bred by themselves, that is *separately*—or sufficiently so to "*insure uniformity of character*."

Mr. Burnet observes that "the existence of different species of horses, naturally suggests the idea that they were designed for different purposes; and that to combine the excellencies of all in one new and distinct species is, to say the least, by far the most difficult problem of breeding."

By substituting the word *breed* for "species,"[*] in the above quotation, it meets my cordial approbation, and I am not conscious of having said anything in opposition to the idea there expressed; on the contrary, the general tenor of my reasoning is in agreement with it. [See remarks on the different mechanism required for running horses and trotting horses—last vol. Cultivator, pp. 204, 205.]

As to the expediency of breeding from thorough-bred stallions, I should not, certainly object to the course, so far as Mr. Burnet has recommended it—viz: to produce from such a mare as he has described, a *city carriage horse*—"to drive about the city at a slow pace, to take the ladies a calling or a shopping."

I will say farther, that I would advise experiments to be made in breeding from thorough-bred stallions for other purposes, or for the production of roadsters, *provided* the right kind of stallions can be obtained. Observe that Mr. B. does not want "a mere scrawny *race* horse," but "*one that takes after the* OLD PATRIARCHS *of his family*—that is staunch and sound, with plenty of bone and substance."

But my object has been rather to lay down certain general rules for breeding, and to give points by which breeding-stock should be chosen, (see particularly No. V of the series, last vol. of the Cultivator, page 304,) than to recommend any particular blood; being confident that improvement would be most readily attained by the former course. EQUUS.

To Cookstove Inventors.

Amid all the numerous Railroad, and Telegraph, and Locomotive, and Air-tight cooking stoves, with their endless modifications, and astonishing improvements, the attention of the inventor seems never to have been directed to two very essential points. We have no convenient contrivance for heating *flat-irons*, without building a roasting fire, ninety-nine hundreths of the heat of which passes into the room and up the chimney, instead of into the irons. Two cords of wood per annum are consumed by my domestics in ironing, over and above what would be needed for the ordinary processes of cooking. A real roarer must be kept up whenever the irons are to be heated. Now, how much, think you, would be saved in the Empire State, by the invention and introduction of a contrivance to remedy this evil? Two cords of wood, cut, drawn, sawed, split and housed, cost, on an average, three dollars per cord—six dollars per year. A hundred thousand families in the State using cookstoves—very moderate estimate—swell the aggregate cost to the snug little sum of six hundred thousand dollars per year. It would be worth while for inventors to set their wits at work, would it not?

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[*] I have regarded the domestic Horse as of *one* species. According to naturalists, only *two species* of Equidae, the Horse and the Ass, are regarded as subjects of domestication.

The other defect, is the want of a good fixture for toasting bread. The inconvenience and difficulty every one knows, but nobody has yet, that I have learned, devised a good remedy. Who will take the subject in hand? A MANUAL LABORER.

Trapping Foxes.

Take some fine hay chaff, from a horse manger, and scatter over about one yard of ground, or on snow, in the open field, where foxes are apt to wander, as near the house as you can bait them. Then upon this chaff, which we call a bed, and around it for some distance, strew a handful of fine scraps for several nights, the refuse of tallow or lard.

At first the foxes will not approach the bed, but will shy around and pick up some of the fragments. Examine occasionally and replenish with a little new bait, if they have taken any. If on the snow, always pass by close to the bed in one direction, not making any extra tracks. In a few nights they will approach the bed and clear the whole ground of the bait.

The best size for a fox-trap, when set, will measure about five and a-half inches across the jaws. The springs should be made of the best steel, and not over five and a-half inches long, each spring. Rub over the trap a little tallow, and smoke it. Make a hole in the snow or ground in the centre of the bed, that when the trap is set, it will be a little below the surface.—Place a wad of loose tow or cotton under the pan, and cover over with dry ashes or sand that has been sifted. Then we spat these ashes down quite compact with a limber stick, say about eighteen inches long, and one inch wide, covering the pan and jaws of the trap, when pressed, about one fourth of an inch. It should be so set that a light weight would spring it. Scatter over, as at first, a thin coat of hay chaff, which is best done with a sieve. If there be snow, sift over the bed a slight layer, unless the trap be set during a gentle fall of snow, which is best; be careful not to make extra tracks about the bed; when all is done, scatter over the whole some fine scraps or toasted cheese, or both, throwing some bits about at a distance. When once well baited, if the trap be skilfully set, there is a fair chance of taking the fox, though he may be an "old one." I have seen many an one caught in this way, having had some fun myself.

A boy can tend two or three traps about as cheap as one. Level cleared land; in the woods foxes are more shy. If the trap be made fast, the fox when caught will make his escape by eating off his foot. A small chain should be attached about eighteen inches long, secured to a stone that will weigh about four pounds; this can lay under the trap when set.

A dead carcass, horse or other animal, makes a strong bait. Set two or three traps within ten rods. If the ground be free from snow, cover over with moss upon the ashes or dry sand, leaving the surface of the ground as natural as possible; make use of a little bait (as above advised) on the trap; the size of a walnut, broken up, is sufficient. You will take more game in this manner, than if set by the carcass, and not be annoyed by dogs.

Another mode of taking foxes is to bait them on a small piece of ground surrounded by water. So arrange it that the fox may leap into a natural or artificial bog, covered with moss, before he reaches the bait. The trap may be covered with moss only, on this small bog, leaving all as natural as possible; you are pretty sure to out-wit them in this manner.

If a trap be set for a fox burrowed in a den, he will not pass over it for some days, unless he be much famished; if there is any other possible way of escape, he is sure to find it.

Foxes deserve more credit than farmers usually give them. They are very useful in destroying mice and insects. If one should now and then, just take a fowl or a lamb, he may be severely punished, *when you catch him.* S. W. JEWETT. *Weybridge, Vt., Dec.*17,1847.

Ashes on Corn.

Stable or yard manure must always stand at the head of the list of fertilizers, for value and universality of application; but gypsum, ashes, lime, bones, &c., will be more or less valuable as auxiliaries. In some cases the effects of the latter may not be sufficiently great to be striking or apparent; in others they are quite conspicuous. An experiment with ashes, by Wm. Van Deusen, accurately conducted, is detailed in a late number of the Gen. Farmer. The soil was a light, thin sandy loam on a hard-pan bottom. Ashes was applied to the hills of corn, after planting, at the rate of 3½ bushels per acre. Two rows, precisely like the rest in every respect, were left unashed. The following are the results, which we have condensed into tabular form; two rows being taken on each side of the two unashed, by way of comparison:

	product.	hog-corn.	good corn.	per acre, in ears.
Unashed,	166½ lbs.	45½ lbs.	121 lbs.	49 bu.
Ashed, west side,	207¼ "	29¼ "	178 "	72 "
Ashed, east side,	205 "	27½ "	177½ "	72 "

Thus it will be perceived that the ashes gave 23 bushels of ears more per acre; the whole gain on the five acre field where the experiment was tried being 115 bushels—besides the increase of fodder—all for 17½ bushels of ashes. The soil was evidently of that character which is most benefitted by the application of ashes. On heavy rich land the result would doubtless have been far less obvious.

Depth of Manure.

Considerable discussion is going on in the papers, relative to the proper depth to bury manure. Some assert that its best parts descend, and therefore it should be but slightly covered; while others maintain that nearly the whole strength becoming gaseous, rises, and it must therefore be buried deep. All this difference of opinion results from the attempt to make a rule that shall apply to all circumstances.

One farmer applies manure to the surface of a newly plowed field late in the spring, and harrows it in. Hot and dry weather follows, and being only partially covered, much of it escapes in vapor and is wasted; the few light rains which occur are insufficient to wash much of the soluble portions into the soil, it never reaches the roots of the crop, and consequently produces little or no effect. Again, he plows it deeply into the soil, and the reverse in every respect takes place. Hence he becomes thoroughly satisfied that manure should *always*, under all circumstances, be buried deep.

Another farmer applies his manure late in autumn, to the surface. Cold weather prevents fermentation, and the enriching portions which otherwise would escape in vapor, is washed by the abundant rains, in the form of liquid manure, into the soil; and by the usual time of plowing in spring, the surface of the soil for a few inches, is saturated with the most fertilizing parts, the plow turning under the rest. All is thus saved; and the farmer is convinced that surface application is *invariably* the best.

They "both are right, and both are wrong." They should act according to circumstances. Every farmer is aware, by the smell, that but little manure escapes from his yard in winter, but much in summer. Hence in winter and in late autumn and early spring, manure may safely lie at or near the surface, and its soluble parts will descend deep enough into the earth. But in a dry soil, and during a dry warm season, it can scarcely be plowed to deep, for benefitting the roots of plants. Indeed, by a shallow covering, it will be likely to do no good at all, the moisture of the earth being insufficient to dissolve it, and hence the reason that manure in dry seasons sometimes does more harm than good. And hence, too, why a thorough harrowing, to break it fine and mix it with the soil, after it is spread, and before plowing in, is found so useful.

Manure.

Good farmers know the great gain resulting from applying the manure which is made during the winter, to the corn and other spring crops. If left to ferment in the yard through summer, one half at least of its value is lost in vapor, &c., and the corn crop receives none of its benefits. But if plowed under in spring, the corn is enriched, the vapor as it escapes is absorbed by the earth, and a double benefit is thus received. But a difficulty occurs where corn fodder is largely fed, which mixing with the manure binds it together so that it cannot be drawn and spread till the stalks have rotted. All this is obviated by cutting the stalks fine in a machine, and more nutriment is obtained from them by the cattle.

Sheep manure is difficult to separate and load, being dry, hard, and crusty in its nature. In order that it may be separated by the fork, take a second-rate axe and chop parallel lines across the heap a foot apart, and cut these again at right angles, which will give blocks a foot square, which may be easily loaded and drawn.

When manure from its coarseness must necessarily be left to ferment a few weeks or months, much of its value may be saved by mixing it, or merely covering it with plenty of muck, turf, earth, saw dust, &c., with gypsum, unslacked lime, and other ingredients of good compost. Gypsum is usually regarded as one of the best absorbents of the gasses of manure; but in drawing out the most fœtid of all manures, we have found covering it with air-slacked lime, far more effectually to destroy the unpleasant odor, than the use of gypsum.

Advantages of Agricultural Associations.

The following judicious remarks, are taken from a preamble to some resolutions passed at a late meeting of the Yates County Agricultural Society. A copy of the proceedings as forwarded to us by the secretary, but we have only room for this extract:

"It is conceded by all classes that the science of agriculture is, of all subjects, the most interesting, and, indeed, absolutely necessary to the existence of the human family; therefore it should claim the greater share of their attention. It is a self-evident truth that in union there is strength, and that by associated action the standard of agriculture may be very much advanced among us, not only in theory, but in attaining to more perfect and certain results in practical farming than we have yet aspired to. Knowledge, the motive power of every science, must be brought to bear upon this subject. This can only be done in the science of agriculture by experiments—these must be extensive, and carefully and accurately compared, until effects can be traced to their causes. Agricultural knowledge can in no way be so well disseminated, and experiments so well compared, as by agricultural societies."

THE CORN CROP.—In 1845, it was 417,800,000 bushels in the United States. In 1847 it is estimated at 600,000,000.

Answers to Inquiries.

TARES OR VETCHES.—J. M. N., Lewisburgh, Pa. By reference to the March number of the *Cultivator*, for last year, page 84, you will find out what these are and what are their uses.

STRAW CUTTERS.—S., Jordanville, N. Y. A cutter for corn-stalks &c., is manufactured by WHEELER & Co., and for sale at the Albany Agricultural Warehouse, that might answer your purpose. There are two sizes—for hand-power and for horse-power—the price of the former, $16, and that of the latter $25. A drum may be attached to the smaller machine, by which it may be propelled by horse-power.

COMPOSITION FOR WOUNDS MADE IN PRUNING—A. C., Edgartown, Mass. The recipe you refer to says: "Take a quart of alcohol and dissolve in it as much gum shellac as will make a liquid of the consistence of paint." As to the *quantity* of gum shellac, it appears obvious that it is necessary to apply it till the mixture becomes "of the consistence of paint." Keep the brush in water when not in use.

SOUTH DOWN SHEEP.—C. C., Meriden, N. H. The average dressed weight of South Down sheep, may be set at from sixteen to twenty pounds per quarter. The mutton is of the finest quality. The price of ewes here would be from ten to fifteen dollars each. The wool sells readily at about the price of half-blood Merino. The South Downs are rather more likely to shed their wool than Merinos. A cross of the Bakewell or Leicester and South Down, would fatten as well or better than either breed, in its purity.

STEEL TEETH FOR CULTIVATORS.—J. A. C., Grand Isle, Vt. Steel teeth for Cultivators can be had at the Albany Agricultural Warehouse, at 62½ cents each, or cultivators with the same kind of teeth, suitable for one horse, can be had at $7½ each. They are of the kind that is used in the western part of the State for working summer fallows. The teeth are fastened by a key, and may be readily taken out and placed in another frame—the same teeth answering for a cultivator for one horse, or two or three horses.

SWAMP MUCK.—O. P., Cananadaigua, N. Y. The information you ask for is given very fully in the October number for last year.

STALLION.—"Baltimore, Md." Such a stallion as is inquired for, of the Morgan or the Morse's Grey stock, would cost from $400 to $800—according to quality and value.

TAR PAINT OR GAS TAR.—J. W., St. Stephens, Alabama. The article advertised as "tar-paint," is produced from anthracite coal in the process of making gas. It is generally used about the consistency of common paint, and is applied to the outside of buildings, such as barns and stables, also to fences, bridges &c. A common whitewash brush is used for laying it on. The coal-tar is also used as a coating for iron, but for this purpose it is boiled to the consistency of pitch.

BUCKTHORN PLANTS AND SEED.—J. W. P., Wyoming, N. Y. This seed can be had at the Albany Agricultural Warehouse.

"A CORD OF MANURE."—J. I. K., Sing-Sing, N. Y. In measuring manure by the cord, the same rule is adopted as in measuring wood—that is, 128 cubic feet make a cord.

CRANBERRIES.—J. I. K. We notice that Mr. WINTHROP LOW of Essex, (Mass.,) obtained a premium last fall for a crop of cranberries, and we presume he could furnish roots, but at what prices we do not know.

☞ Answers to several other Inquiries will be given in our next.

Notices of New Publications.

TRANSACTIONS OF THE WORCESTER COUNTY HORTICULTURAL SOCIETY; by GEORGE JAQUES, Worcester, Mass.

This work contains an account of the origin of the Worcester Horticultural Society, with a full record of its doings from the time of its organization in 1842, to the present time; together with a statement of its financial concerns, notice of the library, abstracts from the reports made at various meetings, list of officers and members, &c. This society has been of great service to "the Heart of old Massachusetts," as the county where it is located has been called. We have witnessed some of its exhibitions, which were of a highly interesting character; and we are glad to hear that a general conviction of the usefulness of the Society, has induced a liberal support. We trust its operations will continue to be unimpeded.

TRANSACTIONS OF THE ESSEX (MASS.) AGRICULTURAL SOCIETY.

We are indebted to JOHN W. PROCTOR, Esq., the president of this Society, for a copy of the Transactions for 1847. It contains several excellent papers, some of which we shall notice hereafter. It is got up in a model style, and furnishes a good example for other societies.

FARMERS' LIBRARY AND MONTHLY JOURNAL OF AGRICULTURE.

This work is progressing in its third volume. It consists of two parts—the first being a re-publication of foreign standard works relating to agriculture; and the second and miscellaneous department, consisting of editorial articles and communications, from correspondents. In the first, or "Library" part, there have been re-published—"Petzholdt's Agricultural Chemistry," "Thaer's Principles of Agriculture;" and there now is in course of reprint, "Stephens' Book of the Farm." The work is under the editorial charge of JOHN S. SKINNER, Esq., well known as the founder, and for many years the conductor of the old *American Farmer*—the first agricultural paper in this country. It is published by GREELEY & McELRATH, Tribune Buildings, New-York. Terms $5 a year.

A TEXT-BOOK ON AGRICULTURE: by N. S. DAVIS.

Dr. DAVIS states that he was incited to write this work by the offer of a premium by the New-York State Agricultural Society, for the best text-book on agriculture. Circumstances, however, finally induced the author to withdraw his name from the competition for premium. A "*text book*" of agriculture, which shall be in all respects beyond criticism, is a work requiring no small amount of knowledge, both of the *principles* of agriculture and its practical details. We have had but little time to examine Dr. DAVIS' work, but shall endeavor to present a notice of its contents and character in our next number. It is published by S. S. & W. WOOD, New-York.

COPEMAN'S VETERINARY TABLET, being a synopsis of the Diseases of Horses, Cattle and Dogs; with their Cause, Symptoms and Cure; by ARTHUR S. COPEMAN, Utica.

This table appears to be arranged with much judgment. Most of the diseases to which horses, cattle or dogs are liable, are here mentioned, and prescriptions given for their treatment. By the aid of observation, and some knowledge of the animal economy, we think it would prove very useful.

AMERICAN JOURNAL OF AGRICULTURE AND SCIENCE.

This publication, heretofore under the charge of Messrs. EMMONS & OSBORN, is hereafter to be conducted by C. N. BEMENT, Esq., who has for several years been extensively known as a writer on agricultural subjects. We are informed that he is to be assisted in the present work, by "several scientific gentlemen and practical agriculturists." The number for January contains contributions from JAMES EIGHTS, WM. BACON, and WM. R. PRINCE. It is published Monthly, at two dollars a year.

AMERICAN JOURNAL OF SCIENCE AND ART.—This excellent work, conducted by Messrs. SILLIMAN & DANA, is eminently deserving the patronage of the friends of science in this country. The number for January last has been received, and contains several articles of interest and value, among which are the following: Account of some Researches on the Protein Bodies of Peas and Almonds, and a Body of a somewhat similar nature existing in Oats; by Prof. JOHN P. NORTON: on the Resistance presented by Fluids to Electric Conduction; by Prof. EBEN N. HORSFORD: Fossil Footprints of a New Species of Quadruped; by JAMES DEANE: on the Depth and Saltness of the Ocean; by Capt. WILKES, U. S. N. The Journal is published on the first day of every second month, at New-Haven, Ct.—Price $5 a year.

MAINE FARMER.—This is one of the oldest of our agricultural publications. It was commenced in 1833, and under the editorial guidance of Dr. E. HOLMES, has "pursued the even tenor of its way" through various vicissitudes. In the fifteen years of its existence, it has been of incalculable advantage to the people of Maine, by encouraging a taste for agriculture and horticulture, and by teaching that the State is capable of supporting a thrifty population from other sources besides *pine timber*. The *Farmer* is now published at Augusta, by RUSSEL EATON, and in typographical execution and neatness of appearance, is not excelled by any other paper of the kind in the country.

Diseases of Animals, &c.

SCRATCHES IN HORSES.—This appears just above the hoofs, behind. Wash well with warm soap suds, and then with beef brine. The writer has speedily cured bad cases in this way.

BOTS IN HORSES.—A correspondent of the N. Y. *Spirit of the Times* gives the following recipe for the cure of bots and cholic in horses:—Take from a pint to a quart of castor oil, mixing in it as much fine table salt as it will take; bleed the horse in the mouth, and when bleeding freely, pour the above down, blood and all.

CARE OF FRESH COWS.—Two to four quarts of wheat bran are found to be one of the best things to give a cow after calving, to facilitate cleaning.

BLOODY MILK.—A correspondent of the *Genesee Farmer*, says his cows all suddenly gave bloody milk, as he supposed, to his own great anxiety, but joy to the pigs, until he found out that it resulted from feeding them red cabbage, of which he happened to have a large quantity—the blood ceased when the cabbage was gone.

Be certain to keep your diseased animals, no matter of what kind, if you have any, away from the rest of your stock. Diseases are frequently contagious, and the sickly or weak can be better cared for when separated from the rest of the herd.

DEATH OF AN OLD HORSE.—A horse called *Charles*, forty-five years old, died on Staten Island on the 12th of December last. The Spirit of the Times states that he was the property of the late O. MAURAN, Esq., of New-York, and that he was bred at Horse Neck, Connecticut, in 1802.

SHEEP-STEALING DOGS.—It is said that if a few of the sheep in a large flock are furnished with bells, the dogs will not attack the flock, a dog thief being a cowardly, sneaking animal, and afraid of noise.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

COMMUNICATIONS have been received since our last, from Agricola, L., Joseph M. Nesbit, L. J. Platt, J. H. Young, H. A. Parsons, F. Holbrook, A. Coffin, Oneida, J. A. Chamberlain, John Williams, J. A. Pinto, N. Whitney, Thomas Guest, Chas. Beasley, S. S. Morehouse, S. D. Martin, J. B. Burnett, Geo. Jaques, Wm. Bacon, A. S. Copeman, H. Junius, H., A. C., E. V. Dox, Alfred Young, Jos. Watson, C. L. Taylor, A. D., P. S. Alricks, T.

BOOKS, PAMPHLETS, &c., have been received as follows:

A DISCOURSE delivered at the Plymouth Church, Brooklyn, on Thanksgiving-day, by HENRY W. BEECHER.——TRANSACTIONS of the Worcester County Horticultural Society, from its organization to 1847, by GEO. JAQUES.——THE ARCHITECT, a series of original designs for Domestic and Ornamental Cottages, by WM. H. RANLETT, Architect, Nos. 1 to 9 inclusive.——ANNUAL REPORT of the St. John (N. B.) Ag. and Hort. Society, from the President, R. JARDINE, Esq.——ESTIMATES of appropriations for 1848, by the Secretary of the Treasury, from D. GOLD, Esq.——CATALOGUE of the Officers and Students of the Western Reserve College, Hudson, Ohio.——COPEMAN'S Veterinary Tablet, by A. S. COPEMAN, Veterinary Surgeon, Utica.——TRANSACTIONS of the Essex, (Mass) Ag. Society, for 1847, from J. W. PROCTOR, Esq., President of the Society.——DOMBEY AND SON, Nos. 13, 14 and 15, of LEA & BLANCHARD'S illustrated edition, from the publishers, Philadelphia.——TRANSACTIONS of the New-Haven Co. Hort. Society, for 1847.——A TEXT BOOK ON AGRICULTURE, by N. S. DAVIS, M. D. Published by S. S. & W. WOOD, New-York.——ADDRESS of S. A. LAW, Esq., before the Delaware Co. Ag. Society.——Congressional Directory, from D. GOLD, Esq.

J. G. C.—The official character of the paper to which you reply, induced its publication; and as we prefer not to open our pages to the discussion of questions which are claimed as party questions, your favor is respectfully declined, as its insertion would probably lead to a discussion, inappropriate to our work.

R. P. Jr. Malta, O.—We can send you any of the vols. of the work you want.

RAT-PROOF GRANARY.—A correspondent at Baltimore, Md., wishes to obtain a plan for a "corn-house and granary," that will be rat-proof, and capable of holding from 200 to 300 barrels of corn. We should be pleased to receive the suggestions of farmers in relation to the matter.

THE WINTER.—The weather up to the first week in January was remarkably mild, as will be inferred from the fact that the steamboats made several trips between Albany and New-York, from the second to the fifth of the month. The ground was not frozen. Mr. L. V. V. SCHUYLER, of Watervliet, states that he plowed several acres on the first, third and fourth of January, and found no obstruction from frost.

CISTERNS ABOVE-GROUND.—A correspondent wishes information through the *Cultivator*, in regard to constructing cisterns above-ground, which he has heard are common in some parts of the country, and are better than those built under-ground.

PRESERVATION OF GRAPES.—We lately saw some very fine Catawba grapes, raised by Mr. E. DORR, of this city, and preserved by Mr. D. K. VANDERLIP, in *ground cork*. The fruit has nearly the freshness of appearance and sprightliness of flavor, that it had when first picked from the vines—being decidedly the best we ever saw at this season of the year. The cork is thought to be the best material for this purpose that has been tried. We should think it might be well prepared in one of Pitt's corn and cob cutters.

☞ We have received from Mr. VANCE, of Groveland, Livingston county, specimens of an apple of which he gives the following history: The original tree was found in the woods, in the town above-mentioned, by Mr. L DUNN, was taken up by him and removed to his place in the year 1796 or '97, where it is now standing. The fruit is the same that was forwarded us by Mr. Johnson a year or two ago, which we pronounced the Herefordshire or Winter Pearmain, and it certainly has nearly all the characteristics of this variety. This is not our own opinion only, but that of several good judges who examined and tasted the specimens with us. Still it may be a seedling—it may be a reproduction of the Pearmain from seed. We also received from Mr. V. samples of two other kinds of apples—one of which he received from a nurseryman as a Pearmain; it is not, however, any Pearmain that we are acquainted with. The other variety sent, we do not know.

LARGE CORN CROP —In our notice of the farm of Mr. JOHN JOHNSTON, near Geneva, in the September number of the Cultivator for last year, we spoke of a field of corn which had been planted with EMERY'S Seed-Planter. It was the latter part of June that we saw the corn, and though it was then very promising, it was impossible to calculate the yield which might be obtained. Mr. J. informs us, in a late letter, that it turned out a heavy crop. There was nineteen acres in the field, but from what was taken up by an open ditch, and what was occupied by trees, he thinks there could not have been more than eighteen acres in the field. Mr. J. says:—"I had 56 tons, 25 pounds of ears of corn. I regretted I could not spare time to weigh the stalks, when dry. On the whole it was the best crop I ever saw." A part of the field had been under-drained with tile. Mr. J. states that this produced far the best corn, though before it was drained it would neither bear grain nor good grass.

REMARKABLE PIG.—At the time of the Pittsfield (Mass.) cattle show and fair last fall, we saw a very fine pig, belonging to Mr. F. A. WILLIS, of that town; and learning from him that he was keeping an account of the food it consumed, we solicited the result for publication. It appears from his statement, that the pig was slaughtered the 20th December last, and that her dressed weight was 460½ lbs. Deducting from this amount four pounds, which it was supposed the pig would weigh when she was dropped, leaves a gain of about one pound seven ounces per day, during her life. Her food was thin skimmed milk from one cow, with oat and rye meal mixed. Mr. WILLIS owned her 217 days; and when he bought her she weighed 20 lbs.—her gain in that time was therefore 435 lbs. The grain or meal was all purchased, and the actual cost of everything consumed, excepting the waste slops of the family, was a fraction less than $20, or about four and a quarter cents per pound.

LARGE YIELD OF BUTTER.—Mr. JOHN LOSSING, of this city has furnished us with the following account of the butter produced in seven days by a Short Horn cow owned by him. She calved the fore part of December; her calf was taken off at about a week old, and in the seven days succeeding, her milk afforded fourteen pounds of butter, besides the milk and cream used in a family of five persons. The food consumed by the cow in the seven days was as follows: "fourteen small bundles of top-stalks, three bushels brewer's grains, half a bushel ruta-baga turneps, four quarts of shorts." The milk used in the family is considered equivalent to one pound of butter.

Mount Airy Agricultural Institute.—By reference to our advertising department, it will be seen that Mr. J. Wilkinson has removed his agricltural school from Dutchess county, N. Y. to Mount Airy, the well known country seat of James Gowen, Esq., near Philadelphia. It will be seen that the new Institution is to be ready for the reception of pupils on the 20th of March. It has our sincere wishes for its success.

Sample of Wheat.—We have received from Mr. Jos. M. Nesbit, of Lewisburg, Pa., a sample of wheat of a variety lately introduced into that section. It is a red bearded wheat, the grain tolerably plump. We are told it ripens late, but it has not been cultivated in the neighborhood from which it was sent a sufficient length of time to ascertain its value. We do not know the variety.

Multicole Rye.—Several of our correspondents have requested us to send them small parcels of this rye by mail, which we hoped to have done; but we have not been able to obtain a spoonful of it since these requests were made.

Catalogues of Nurseries.—We have frequent calls for these catalogues, and nurserymen might promote their interests by sending us a few copies, free of expense, for distribution to applicants.

Holbrook's School Apparatus.—Mr. Josiah Holbrook desires us to say that he is in no way responsible for "Holbrook's Apparatus," purporting to be made by Holbrook & Co., of Ohio. He considers it essentially and mischievously defective and erroneous.

"Render," &c.—The article on "Curing Meat," credited by the *Mass. Ploughman* to the *Philadelphia Saturday Post*, and attributed by other papers to various sources, originated in the Cultivator—December number, 1844.

Winter Squash.—Mr. Samuel O. Tabor of Slatersville, R. I., gives us the result of the product of a piece of ground, 40 by 50 feet in extent, devoted to winter squashes. The yield was 700 pounds, of which 670 pounds were sold for $10. The product was at the rate of 15,900 lbs per acre, and at the price for which the above portion was sold, would be worth $237.31. The soil is described as "yellow loam"—the manure from the hog-yard. The squashes were of the striped crook-necked variety, and were planted in hills six feet apart.

Large Beets.—Mr. E. S. Salisbury, of Ellisburgh, Jefferson county, N. Y., informs us that he raised three beets of the scarcity variety, which weighed as follows: 14¼, 15¼, 17 pounds. Several others in the lot weighed from eight to ten pounds each.

Scientific Liberality.—The Massachusetts Agricultural Society has ordered from Paris, at a cost of about $800, the figure of a horse of full size, so constructed as to admit of all the pieces being taken apart. These pieces represent the muscles, blood vessels, heart, lungs, and other organs, of their natural size and appearance. Such objects would be admirably adapted to agricultural schools, and would afford the pupils accurate and useful information, scarcely to be obtained in any other way.

Improving Grain.—B. P. Johnson says, in speaking of English Agriculture, in his Greene County Address, "Great care is taken in the selection of seed grains. In many instances, so much nicety is observed, that the earliest and most luxuriant heads are taken out by the hand, and carefully drilled in until the product is sufficient for use; and in this way some of the best varieties of wheat now grown in England have been secured."

Occupations of the People.—It is stated that the men of the United States are engaged nearly as follows:

Internal Navigation,	33,000
Ocean Navigation,	56,000
Learned professions,	65,000
Commerce,	120,000
Manufactures,	792,000
Agriculture,	3,720,000

Thus, farming occupies about three and a-half times all the rest; why then should not agricultural periodicals be taken in like ratio, in comparison with others, that men may become properly informed in the business which occupies nearly all their time?

"Quarter" of Grain.—In England. a ton is 2.240 lbs., a *quarter* of that 560 lbs, which is the weight of a British, or Imperial quarter of wheat, or 8 English bushels, the bushel being 70 lbs., thus 8 × 70=560. The U. S. bushel being 60 lbs., 9½ of our bushels constitute a quarter.

Exports of Corn.—From 1701 to 1819, they were often a million, sometimes two millions. From 1819 to 1845, they did not in any one year amount to a million. In 1846, they exceeded two millions, and in 1847, they exceeded *nineteen millions*.—But this, enormous as it is, is only a thirtieth of the whole crop of the country.

Green Crops.—The *American Agriculturist* says that a few years ago, he renovated "a miserably poor field," by allowing the spontaneous growth of weeds, and then plowing them in as often as the principal ones were going out of bloom.

Irrigation.—There is one fact connected with irrigation which should be borne in mind by those who practice it—that the beneficial effect is not produced when the water is allowed to *stagnate* and sink down in the soil, but it must be kept in motion in a current over the surface.

To exterminate Briars.—To eradicate briars which grow along fences, plow deep, and sow oats. When cut, plow deep as the briars appear, and they will soon become smothered out. No plant can live long, unless it can *breathe* through its leaves.

Potato Rot.—A writer in the Gen. Farmer says: "The Mercer seems most affected by the rot, the Pink Eyes next, the Merinos next, and the June potatoes least, or not at all"—probably ripening fully before the advent of the disease.

Profits of English Farming.—An European correspondent of the Genesee Farmer states, that although the farmers in England have to pay large rents, he thinks their nett profits are greater than those of American farmers, who own the lands they occupy. He thinks the principal reason is, that there is a good home market for nearly all kinds of agricultural productions; and that the same advantages can be reaped in America only by an extensive encouragement of manufactures; and that a distant foreign market for grain, with heavy drawbacks for frieght, cannot be depended on; and much less so for the smaller and less substantial products.

Profitable Dairy.—A farmer in Lancashire, England, lately realized a sum of money equal to $200, by the sale of 13¾ cwt. of cheese, the product of 13 cows, in 38 days—more than 50 cts. per day from each cow. The secret—the best cows, first-rate feed, and the best management in cleanliness, regularity, and in all other respects.

Onions.—J. W. Proctor, Esq., President of the Essex county (Mass.) Ag. Society, states that, from inquiries made, it appears that the average yield of onions in the town of Danvers the past year, (where

200 acres were cultivated,) was 180 barrels, or from 4 to 500 bushels per acre. That the average value for several years has been $1 per barrel. That the average cost of cultivating an acre of onions, does not exceed $75—leaving a net income from the land of $100 per acre.

Seedling Potatoes.—See advertisement of Rev. N. S. Smith of Buffalo, in this number.

A single grain of Barley, sown in a garden in England, in the spring of 1847, is said to have produced 75 stems, 50 good ears, 20 indifferent ones, and 1,795 grains of barley. The plant and its produce are preserved in the museum of the Royal Agricultural College.

Artificial Stone.—It is said that a process has been patented in England for making artificial stone of every quality, from artificial granite to statuary marble. The invention is stated to be founded on a chemical analysis of the natural varieties of stone. It is made of flinty and siliceous grit, rendered fluid by heat, and poured into moulds till cooled and hardened. The artificial stone has, as is stated, already been used for coping stone for variegated pavements for halls and rooms, stone ornaments—such as mouldings for friezes; also for grind-stones and hones. The invention is thought to be particularly applicable to the lining of cisterns and water-pipes—its vitreous qualities insuring cleanliness. The process of manufacture is said to be easy and cheap.

Lime and Plaster.—In Scotland, where the climate is so much more moist than in the United States, plaster or gypsum is of little use, but lime is very important. Gypsum is of great utility in the dryer climate of America; but would not a parity of reasoning show that lime might be used to excellent advantage on our wetest soils?

India Rubber.—It is well known that India rubber has been substituted for steel springs in rail cars and carriages. It is now found that railroad wheels, even for freight cars, are greatly improved if cast double, so as to admit a layer of india rubber between the two parts, one being within the other, which greatly lessens the heavy jarring occasioned by concussion on the rail.

Smut in Wheat.—N. Simons, of Castile, N. Y., states in the Gen. Far. that he took six fine heads of wheat, and three of them he rubbed out and sowed with as many heads of smut. The product was two-thirds smut, as was found by counting the heads in the crop. The other three heads were sown on a clean place remote from the others; not a particle of smut was produced. This experiment entirely accords in result with others, showing conclusively the importance of clean seed.

Roots on Drained Swamp.—The Mark Lane Express gives the result of an experiment made on the lands of Lord Stairs in Wigtonshire, on a morass which had in part for thirty years been cut over for peat, and sixty acres of which were found barely sufficient to pasture two cows and their calves. It was drained, pared, burned, limed, manured, and sown to oats, and yielded 40 bushels per acre. Next year it was top-dressed, with gravel and sand, limed, manured and plowed; a part sown to turneps, yielded 32 tons per English acre; and seven acres planted to potatoes yielded 460 bushels per English acre.

Whey for Cows.—The Herkimer dairymen give their whey to the cows, finding it more profitable than to feed it to their hogs. Most cows eat it greedily.

City Milk.—It is stated that the very unwholesome milk, which is so largely sold in New-York city, as "Pure Orange County," &c., and produced by closely imprisoned cows, fed on distiller's slops, may be known after a little experience by its peculiar and unpleasant smell. It is believed that a large part of the mortality among children in cities, is owing to the use of such deleterious drinks.

Wagon Grease.—Booth's patent grease for railway cars, might be useful perhaps elsewhere, being composed of tallow 8 lbs., palm oil 10 lbs., soda ¼lb., heated with a gallon of water till nearly boiling, and constantly stirred till down to 70° Fah.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Jan. 21, 1848.

FLOUR—Genesee per bbl. $6.06¼—Ohio and Michigan $5.06¼.

GRAIN.—Wheat, Western, per bu., $1.40—Corn, northern, 72a 75c.—Rye, 80c.—Oats, 45a46c.—Barley 90c.

BUTTER—Orange County, per lb, 20a22c.—Western, dairy, 14a16 c—Ohio 10a12c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $8.37½a$9.—Prime $5.37½a$6.

PORK—Mess, per bbl., $11.87a$12—Prime, dull, at $7.75a$8.

HAMS—Smoked, per lb., 7a7½c.

LARD—Per lb. 8a8½c.

HEMP—Russia clean, per ton, $225a$235.—American dew-rotted. $120a$140.

HOPS—First sort, per lb., 5a6c.

COTTON—New Orleans and Alabama, per lb., 7a10c.—Upland and Florida, 7a8½c.

WOOL—(Boston prices.) Jan. 20.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,..................	40a45	"
" three-fourths blood fleeces,.........	35a38	"
" half blood do	32a35	"
" one-fourth blood and common,.....	28a30	"

MOUNT AIRY AGRICULTURAL INSTITUTE.

THE subscriber having rented the Mount Airy Farm, the late residence of James Gowen, Esq, with all its extensive and eligible appliances for the purposes of a *Farm School*, will remove his school, now the Duchess Agricultural Institute, of Duchess Co., N. Y., to the above place, where he will open for the summer term on the first Thursday of April next; after which it will be known as the Mount Airy Agricultural Institute.

The winter term will commence on the first Thursday of October. This farm, which is located on the Germantown road, 7 miles from Philadelphia, Pa, having been so long known as *the model* farm of the United States, the site being proverbially *beautiful* and healthful, a minute description is deemed unnecessary; suffice it to say, that it presents every inducement and desirable facility for the establishment and maintenance of an Experimental, Practical and Scientific Agricultural Institute

The course of instruction will be such as to give the students every facility for acquiring a thorough knowledge of Scientific and Practical Agriculture, with the use of the best modern farm machinery and implements, together with a select farmer's library, including numerous Agricultural Periodicals Instructions *will* also be given in all the collateral branches requisite to insure the great desideratum which it was the object of the founder and *Principal* to supply by an education commensurate with the exalted destinies of a landed interest.

Chemistry and the other Natural Sciences receive particular attention—lectures with full experimental illustrations being connected with each course. The Zoonic course will commence with the Horse, a perfect skeleton of which being provided for illustration.

The best facilities are also afforded, that those who desire may here acquire a Commercial Education, to the end that they may lay the foundation in youth of a future life that shall be agreeable, healthful and useful

Fee for the year, $200, payable semi-annually in advance This sum includes Tuition, Board, Washing, Fuel, and Lights An extra charge of $12 00 per annum will be made for pupils not furnishing their own bedding and toilet furniture The modern languages $10 each extra per term, as also drawing.

This Institution is under the patronage of the American Agricultural Institute, the Farmer's Club of the American Institute, and the Duchess Agricultural Society.

For further particulars address JOHN WILKINSON,
Principal of the Duchess Ag. Institute, Poughkeepsie, N, Y., and after the 20th of March at the Mount Airy Agricultural Institute, Philadelphia, Pa.

REFERENCES.

Jas. Gowen, Esq., Philad., Pa.,
Robert Ewing, Esq., "
Zebedee Cook, Esq., N Y.,
Thos. McElrath, Esq., "
J. D. Williardon, Esq., N. Y.,
Rev. F. A Farley, Brooklyn,
Sam'l Allen, Esq., N Y.,
G. A. Amaux, Esq.
C. H. P. McLellan, Principal Po'keepsie Female Academy
Geo. Vail, Esq., Troy, N. Y
Benj. P. Johnson, Esq., Albany.
H. Weed, Esq., Newburgh, N.Y
Cha's. Bartlett, Principal Collegiate school, Poughkeepsie.,
Wm. A. Davies, pres't of Far. & Manufac'rs Bank, Po'keepsie,
M. J Myers, pres't Merchant's Bank, Poughkeepsie.
Rev H. G Ludlow, Po'keepsie.
Rev. A. Polhemus, Hopewell, N.Y
Rev. S. Mandeville, Lagrange, N. Y.,
Hon. Alfred Conkling, Auburn,
Robt. Farley, Esq., Boston, Mass.
Wm. C. Gibbs, ex-goveror of Rhode Island, Newport, R. I.,
Geo. W. Dobbin, Esq., Baltimore,
R. W. Crookshank, jr., St. John, NewBrunswick.

Feb. 1, 1848—2t.

FRUIT AND ORNAMENTAL TREES, GRAPE-VINES, &c.

BLACK Hamburgh, White Muscat of Alexandria, Royal Muscadine or Golden Chasselas, Early White Sweet Water Grape Vines. strong plants, raised from single eyes in pots and shifted, roots two years old and abundance of them, stems one year old, 6 feet ripe wood, price $5 for 6—$9 per dozen : *Cash with the order*. Taken out of the pots, carefully packed, the roots with the balls of earth in moss, and forwarded from New-York as directed. Also, good one year old plants of the above and other foreign varieties, at $6 per dozen; and superior *Isabella* vines, 3 years old, for speedy bearing—$1 for six, and $7 per dozen: packed, &c. Also, other native varieties, and every description of *Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c.* including the newest and choicest varieties, for sale *at moderate prices*, at the *Ancient* and *Real Linnæan Botanic Garden and Nursery*, late of *William Prince*, deceased, Flushing, L. I., near New-York. Descriptive Catalogues gratis, on application *post-paid*.

Feb. 1. 1848—2t. WINTER & Co., Proprietors.

TO ALL AMATEUR POMOLOGISTS AND NURSEREYMEN.

WM. R. PRINCE & Co., Flushing, have just issued a Supplementary Catalogue of Pears exclusively, stating the age, sizes, and prices; and also which are on Pear, and which on Portugal Quince stock. This will be sent to all *post-paid* applicants. It is scarcely necessary to remark, that such is the scarcity of the choicest kinds of Pears, that although found in numerous Catalogues, there exists but few suitable for immediate sales. Having anticipated the demand, we have at great pains and expense concentrated in our establishment *the largest and finest collection of Pears existing either in Europe or America*. Those who send orders early will be supplied *without a single omission*, and we urge purchasers to inspect our Nurseries and judge for themselves. Of all other Fruit and Ornamental Trees, Shrubs and Plants, we have a great supply, and especially of Evergreens.

Table Grapes.

We now offer the most estimable assortment of Table Grapes ever presanted to Amateurs, having culled the choicest from every country. An examination of the description in our Catalogue (36th edition) will satisfy every amateur on this point.

American Wine Grapes.

As our country has begun to develop its appropriateness for Vineyards, we have greatly increased our stock of the kinds of Grapes most suitable for that object, comprising 25 varieties, and will supply them by 100 or 1,000, at low rates. We have 20 varieties that are estimable for the table, several of which are equal or superior to the Isabella and Catawba. Feb. 1, 1848—1t.

ALBANY AGRICULTURAL WAREHOUSE,

Nos. 10 and 12 Green-st.

CONSTANTLY for sale at the above establishment, all the most approved Machines, Implements and Tools required by the Farmer and Horticulturist. among which are the following:

Horse powers and Threshing Machines.
Fanning Mills, Grant's and others.
Straw and Cornstalk Cutters—all kinds.
Corn Shellers of all kinds.
Mott's Agricultural Furnaces, all sizes.
Vegetable Cutters, Hay and Manure Forks.
Corn and Cob Crushers.
Fitzgerald's Patent Burrstone Mills.
Howard's and Freeborn's Mills, &c., &c.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5.000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees. 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15.000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500.000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. THORP & SMITH.

Syracuse, N. Y., Nov 1—6t.

N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATOES,

COMPRISING several sorts of Pinkeyes, Russets, Purples, Reds, Whites, Rareripes, Orange, and others not yet fully developed. All purely Seedling—the product of a careful and expensive experiment of six years with the seed from the balls and its Seedlings in alternate reciprocal culture *Reciprocal*, because in each rotation the seed improves the Seedlings, and the Seedlings the seed. By this method of culture these potatoes have acquired a *healthy* and *early* character, are *very productive* and of the *finest quality*. Having been for so many years in succession planted in April. (in their seed,) and early harvested, they have become *constitutionally* what they are, and with early planting, early digging, dry and airy storage, they will prove *sound* and *durable*—and the method continued, the development of new varieties and improvements will also continue.

Also, "N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATO SEED." This seed was gathered in the balls last September from a four acre crop of Seedlings, from improved seed sown in April last. Six years alternate reciprocal culture with its Seedlings, has given it an *early* and *very productive* character. It will produce Seedlings of the size of small birds, eggs as early as in May. Season favorable, with good culture, it will produce the first season sown, about 200 bushels per acre, a good proportion of marketable size. sufficiently mature for the table, and seed balls in abundance. Tubers of the weight of 12 oz. were quite common among the young Seedlings last fall, and on the roots of many single plants were found fully set and growing, hundreds of Seedlings, though when so numerous, mostly small. In addition, this seed is impregnated (by the pollen in the blows) with choice varieties, late from Germany, England, South America, Albany, Illinois, and home markets—mostly Seedlings, interspersed for that purpose in the field; and it will represent, when culivated, all the distinct varieties grown in that field, besides an amusing freak of mottling, tinting, and originality. The seed may be sown in April like tomatoes, in a warm bed. Bleached cotton cloth, tacked on frames for potato beds, is better than glass. The beds should be open to warm rains and to all warm weather. The same hands in a given time will transplant with the young plants more ground than can be planted with tubers. (*Particular* directions accompany the seed.) These potatoes and seed were represented at the two last State and County Agricultural Fairs, and the first premiums awarded them. The cultivation of these potatoes and their seed will be continued at Buffalo with every possible improvement. Seedlings of approved varieties carefully packed in chaff, and delivered at the wharf or depot in Buffalo, $5 per bushel—$10 per barrel. Transportation safe from frosts after February. Seed per paper—sufficient to produce 10 bushels—$1, with directions. It may be conveyed by mail with double postage. Orders and communications, post-paid, will receive prompt attention.

Buffalo, Jan. 13, 1848—3t. N. S. SMITH.

Extract from the Report of the Committee on Vegetables at the last New-York State Fair.

"The committee on vegetables have reported, that for the greatest and best varieties of Seedling potatoes of approved varieties, they award the premium of ten dollars ($10) to No. 73, presented by N. S. Smith, of Buffalo, N. Y. These potatoes were grown by the Rev. N. S. Smith, of Buffalo, who has favored us with the manner of their cultivation and production. He has been six years cultivating them from the balls that grow on top of the vines; his method is the alternate planting of the seed and tuber or potato, taking care to select always the best varieties. He has presented at the Fair as a specimen of his crop this season, thirty varieties of Seedlings, all of them evidently of fine quality. His specimens of this year's Seedlings, from the seed of his best Seedlings, are very fine. He presents, also, fine specimens of Seedlings from seed of Seedlings grown last year in Prussia, Germany, and fine varieties, late from South America. Mr. Smith is confident, and the Judges favor the opinion, that in his experiments a great improvement in the potato is already accomplished; and he hopes to be able to obtain permanently, potatoes not only of the finest quality, but perfectly sound and hardy. The judges would recommend the attention of farmers to his specimens on the ground, and also to his mode of cultivation." Signed by DAVID GRAY, Chairman.

WATER RAMS.

A SUPERIOR article of Water-Rams for sale. Price $15 to $18. A. B. ALLEN & Co., 187 Water-st., N. Y.

Jan. 1—2t.

SPRING WHEAT AND RYE.

SUPERIOR Spring Wheat for sale at $2 per bushel. Spring Rye at $1.75 per bushel. Also a complete assortment of Field and Garden Seeds of all kinds principally grown, and put up expressly for use. A. B. ALLEN & Co., 187 Water st., N. Y.

Jan. 1—2t.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: A *very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

For sale at the Office of the Cultivator,

FRUITS AND FRUIT TREES of America—illustrated edition, with Seventy colored Plates of Fruits—price $15.—Also, the cheap edition of the same work—price $1.50.

THE FRUIT CULTURIST, by J. J. Thomas—price 50 cents.

AGRICULTURAL IMPLEMENTS FOR SALE.

HORSE POWERS.—Taplin & Eddy's Circular Horse Powers. Price, $60 to $75; Wheeler & Whitman's Endless Chain do., single-horse, $75; double-horse, $100; Trimble's, Warren's, and Child's Cast-Iron do., $50 to $75

GRAIN THRESHERS.—Wheeler's Thresher at $25; ditto with Separator, $35; Taplin & Eddy's Thresher, $40; Trimble's and Warren's do., $25; Whitman's and Pitts' Thresher, with Separator and Cleaner, for one or two horses, $100. Pitts' Thresher, Separator, Cleaner, and Horse-power, complete, $200.

CORN SHELLERS.—Corn Shellers to work by hand or other power. Price, $3 to $50.

STRAW CUTTERS.—Straw Cutters of various kinds, to work by hand or other power. Price, from $3 to $40.

GRAIN MILLS.—Grain Mills to work by hand or other power. Price, from $5 to $30. Do. of Burr Stone, from $50 to $125.

CORN AND COB CRUSHERS.—These grind corn and cobs together Price, $35 to $50.

SPICE AND COFGEE MILLS.—Several of these are of a new and superior kind. Price, from $2 to $10.

PLOWS, for the South and North.—Superior Plows of various kinds for sod and stubble land, from one-horse to six horse draft. Also, the Scotch Iron, Centre-Draft, Self-Sharpening, Side-Hill, Wet Meadow, Double Mould Board, Paring, and Sub-soil Plows, with common or patent dial clevis. Price from $2 to $20. The woods of the above plows are of choice white oak, and got out by patent machinery. The castings are of the best kind.

Also a complete assortment of all kinds of Agricultural and Horticultural Implements, Field and Garden Seeds.

A. B. ALLEN & Co., 187 Water-st, N. Y

Jan. 1—2t.

JUST PUBLISHED, AN ILLUSTRATED TREATISE ON
DOMESTIC ANIMALS,

Being a History and Description of the Horse. Mule, Cattle, Sheep, Swine, Poultry, and Farm Dogs

WITH directions for their Management, Breeding, Crossing, Rearing, Feeding, and preparation for a profitable market. Also, their Diseases and Remedies, together with full directions for the Management of the Dairy, and the comparative economy and advantages of working animals, the Horse, Mule, Oxen, &c. By R. L. ALLEN, author of "Compend of American Agriculture," etc.

The above work contains more than FORTY ENGRAVINGS and PORTRAITS of improved animals, illustrative of the different breeds and various subjects treated in it.

The most minute as well as general principles for breeding, crossing, rearing feeding, and management of all domestic animals. are herein given, to produce the utmost marketable value for the food and attention bestowed on them; as well as to prevent disease, and save the immense losses which annually occur from this source.

The diseases of animals are also fully treated, with their remedies, management, &c., &c. Published by C. M. SAXTON, 205 Broadway, N. Y.

Price, 75 cents, elegantly bound in cloth.

New-York, Jan. 1, 1848.—3t.

THE AMERICAN ARCHITECT.

Published Monthly, at $3 per annum—Single numbers 25 cents—by C. M. Saxton, 205 Broadway, N. Y.

THE object of this publication is to introduce ORIGINAL DESIGNS of *Country Seats*, adapted to the varied tastes and circumstances of an American population—from the elegant Villa to the simple Cottage and plain Farm-House; from Planters' Mansions to Village Domicils. In a word, every variety of Rural Residences will be embraced in order to meet the views of every person desiring a Country House. In respect to style, cost, arrangement, finish, &c., utility will never be sacrificed: economy in the outlay, with an appropriate style, will always be kept in view. The requisite details, specifications, plans, and directions, with a careful and reliable estimate of the cost, will accompany each design. These are essential features of a *Practical Work*—and no labor will be spared in their preparation.

Of the diversity of human dwellings, whether marked by elegance, convenience, or utility, or by the want of them, none can compare in national importance and philosophical interest with the FARM HOUSE—the Homestead of our species.

The selection of designs by those about to build Country Residences, is commonly attended with embarrassment, and always with expense. When furnished by professional men from general ideas communicated by proprietors, they are seldom satisfactory. The AMERICAN ARCHITECT, by furnishing a collection of designs adapted to all tastes and means, will remove every difficulty in the choice, and save money expended on plans of no use. It will furnish 12 Elevations, Plans and Specifications in each year, at a price not exceeding one seventh of the usual charge for one

"The price is only 25 cents for each number. and it is surely next to impossible but that such a periodical will obtain a wide circulation."—*N. Y. Tribune.*

"This work promises to supply a want which has long existed, and to be of essential value."—*Salem Register.*

"This work cannot fail to be useful and popular."—*Boston Bee.*

"This is a good and beautiful work, and well adapted to effect a much desired reform in Am. Architecture."—*Boston Trav.*

The *cost* of building from the plans given, will be from $600 to $5000, with complete specifications from a first rate Mason and Carpenter, and the prices given can be depended upon.

New-York, Jan. 1—3t.

GODEY'S LADY'S BOOK AND FAMILY MAGAZINE FOR 1848.

INCREASED AND INCREASING ATTRACTION, with the largest circulation and greatest popularity of any Magazine in the United States.

New Department.—The Treasury

will contain articles from Bryant, Longfellow, Percival, Oliver Wendell Holmes, Washington Irving, N. P. Willis, Hoffman, Tuckerman, Simms, Halleck, Paulding, Mrs. Sigourney, Miss Gould, Dana, Herbert, Fitz Greene Halleck, Miss Sedgwick, Theodore S. Fay, (from whom we have received a Novellette, which we shall shortly commence) Mrs. Annan, Park Benjamin, E. A. Poe, &c.

The most Beautiful Embellishments

From the hands of the first artists, and, consequently far superior to these in any other Magazine, adorn "The Book."

Ornament and Utility are Combined.

The popular series of articles on Health, Model Cottages, and Needle-Work, &c., illustrated with fine engravings, will be continued, and such other features as can be made subservient to the grand design of the work, the

Mental and Moral Improvement

of its readers, will from time to time be added.

Colored Fashions

every month, altered from the French to suit the more modest taste of the ladies of this country.

THIS IS THE BEST TIME TO SUBSCRIBE.—Persons commencing with the January number, will receive

Miss Leslie's new Novel,

now entire, as the portions already published will be reprinted in that number. No diminution in the usual interest and variety, but an increase in the number of the pages.

TERMS.

One copy one year, which includes "The Lady's Dollar Newspaper,"	$3 00
(Making three publications in one month, for the above small sum)	
One copy two years,	$5 00
Two copies one year,	5 00
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Eight copies one year,	15 00
Twelve do do.	20 00

Any Postmaster or Editor of a Newspaper sending us two dollars for the Lady's Book alone, may retain the other dollar as commission. This commission cannot be allowed when the Lady's Book and Dollar Newspaper are expected for $3. Address

L. A. GODEY,
113 Chestnut-st. Philadelphia.

Jan. 1—2t.

THE LADY'S DOLLAR NEWSPAPER,

CONTAINING articles from the best writers of England and America, and translations from other languages. Also, all the

English Annuals Entire,

which cost in this city from $5 to $10 each. An Annual will be published in one number, which will cost about four cents to the subscribers of the Lady's Dollar Newspaper.

In addition to the above, the paper will contain Tales, Poetry, Essays, Feminine Accomplishments, Useful Receipts for the Toilet, (from a work which has been imported expressly,) Fashions, Health, Fancy Work, Housekeeping, Domestic and Fancy Cookery, from Soyer's great book, just published.

It will be seen that the subscribers to this work will receive twice a week for one dollar, that which in any other shape would cost them from $3 to $6.

TERMS.

Single copy one year in advance, $1; six copies, $5; thirteen copies, $10.

A copy of either work sent as a specimen gratis to any person who will pay the postage on the letter requesting it. Address

L A. GODEY,
113 Chestnut-st., Philadelphia.

Jan. 1—2t.

COUNTRY SEAT FOR SALE.

THE elegant Country Seat, situate in the town of Livingston, Columbia county, on the New-York and Albany post-road, distant about nine miles southeast from the city of Hudson, and four miles east from the river—the late residence of Joseph W. Russell, deceased. The place consists of about 95 acres of highly cultivated land, and is well stocked with a great variety of choice fruit. The house is a substantial brick building, 60 feet by 40, well supplied with water from a large brick filtering cistern. The barns, carriage-house, ice-house, and other out-buildings, are large and commodious.

There are upon the place, wells and springs of pure water, at convenient distances from the house and barns.

The village of Johnstown, which is but a quarter of a mile distant, contains a church, school. post-office, &c.

The owner is willing to sell, *separately from the farm*, the Residence, with about twenty acres of land, embracing the entire ornamental part of the place; and including the garden, fruit trees, barn, carriage-house, ice-house, etc.

For terms and other particulars, enquire of

Albany, Dec. 1—6t. W. E. BLEECKER.

WANTED TO PURCHASE

SOME superior Potato Onions, for seed; any person having from five to twenty bushels for sale, will find a customer, by applying, (if by letter, post-paid,) to CHARLES SPRATT, Utica.

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GRAPE VINES.

10,000 Isabella Grape Vines; **6,000** Catawba do.; **4,000** Aleaxander or Muscadel do; of suitable age and size for forming Vineyards. **1,250** Catawba Vines, four years old, will produce fruit in 1848, suitable for gardens. For sale in large and small quantities on the best terms. Purchasers of vines from the subscriber will receive, free of charge, a practical treatise (just ready for the press) on the cultivation of American Grape Vines, and the manufacture of Wines, treating particularly of soil, location, planting of vines, manuring, training and pruning, illustrated with plates. Vines will be packed so as to be sent to any part of the world with safety. Letters of inquiry, *post paid*, promptly attended to. Apply to B. G. BOSWELL,

Feb. 1—2t. 230 Pine-st., Philadelphia.

ENGLISH AND FRENCH GRASS SEEDS.

THE subscribers have just received from England and France, a superior lot of *fresh* Grass Seeds of various kinds. Among these are the Perennial and Italian Ray Grass, Sweet Vernal and Oat Grass, fine mixed Lawn Grass, White Clover and Lucerne, English Beans, Vetches, &c., &c. A. B. ALLEN & CO.,

Feb. 1, 1848—tf. 187 Water-st., New-York.

OSAGE ORANGE, YELLOW LOCUST, AND BUCKTHORN SEED.

THE above, together with a general and complete assortment of fresh Field and Garden Seeds, for sale by

A B. ALLEN & CO.,
Feb. 1, 1848—tf. 187 Water-st., New-York.

SEED SOWERS.

FOR sale at the Albany Ag. Warehouse, a large supply of EMERY'S SEED SOWERS, on hand, and being made for spring sale. The manufacturer has been awarded the N. Y. State Ag. Society's first premium. He also received the first premium at the Fair of the Mechanic's Association, held at Boston in September last. Feb. 1, 1848. H L. EMERY

NEW AGRICULTURAL WAREHOUSE.

SAMUEL C. HILLS, No 189 Water-st., New York, offers for sale Prouty's Plows and Horse Rakes, Wilkinson's Harrows, Corn Mills, Corn Shellers, Straw Cutters, Horse Powers, Churns, Grain Cradles, Scythes, Hoes, Rakes, &c., &c.

Patents secured upon moderate terms, and patent articles and rights bought and sold on commission.

New-York, Jan. 1, 1848—3t.

15,000 Buckthorn Plants.
10,000 Osage Orange Plants.

Also, Buckthorn Seed by the pound or bushel. For sale by

Feb. 1. L. TUCKER, Ag. Warehouse.

FINE BLOOD MERINO SHEEP FOR SALE.

THE subscriber being about to retire from the farming business, offers for sale his entire flock of Merino sheep, which have been bred with the greatest care from the best flocks in the country. Of these 75 are ewes now with lamb by a buck from the recent imported flock of John A. Taintor, Esq., of Hartford, Conn.; 25 bucks one year old last spring from the above ewes, sired by the Rambouillet buck Chancellor; and 50 lambs the increase of last year, sired by the Rambouillet buck Grandee, now owned by the Rev. L. G. Bingham, of this place. As to purity of blood, fineness and weight of fleece, and strength of constitution, they are excelled by no Merinos in the country. The buck purchased from the recent importation of Mr. Taintor will also be offered for sale. To those wishing to improve their sheep, or those wishing to start a good flock, the present offers a rare opportunity, as they will be sold without reserve. Communications addressed to the subscriber will receive immediate attention. THOS. D. CANFIELD.

Williston, Vt., Jan. 15, 1848—3t.

IMPROVED PORTABLE RAILROAD HORSE-Powers, and Over-Shot Threshers and Separators.

HAVING sold about seventy sets of these Powers and Threshers the past season, many of which were purchased by some of the large wheat growers in this State, Vermont, Michigan, Illinois, Wisconsin, and Canada, and without exception having given entire satisfaction, (which was guaranteed in all cases,) we do not hesitate to recommend them to Farmers and Mechanics desiring such machines, as being in our opinion the most convenient, if not superior in all respects to any others now in use. Very many flattering testimonials have been received, several of them estimating the cost of threshing at less than one-half that with the ordinary sweep powers with from four to six horses. Having made arrangements for an extensive sale and supply for the current year, and with several improvements in their construction, and a better finished article, I am enabled to afford them on better terms, inasmuch as one-half the ordinary charges for freight during the months of navigation, will be allowed to any point on any of the canals within the State, and the same amount towards the freight if sent by any railroad. Some of the principal advantages of these machines are these:—The power itself occupies very little space, and is operated wholly, if desired, by the weight of the horse, the power being placed at an angle of ten to fifteen degrees only, according to the weight of the horse, which is found sufficient for threshing all grains, sawing wood, &c. It is comparatively light and portable, and can readily be handled by two men, and used on any common threshing floor, thereby securing ease and safety to both man and beast during stormy weather. The moving parts are very simple, as sufficient speed for all purposes is obtained with but one shaft, without geering; thus avoiding a great amount of friction which is unavoidable in most other machines in use The Thresher is rather new in many respects, and has several important advantages over most others. By having an overshot cylinder, it admits of a level feeding table, and the person feeding it also has the control of the horse, and by means of a brake, the power can instantly be checked or stopped by him with perfect safety, thereby often avoiding accidents. By this over-shot motion, all hard substances are prevented from getting in, avoiding the danger of spikes being broken and thrown out—not an instance being known of such accident. By this machine the grain is not scattered, but thrown upon the floor within three feet of it, and admits a separator to be attached sufficiently high from the floor for all the grain to fall through it, while the straw is carried quite over in good condition for binding, the straw not being cut, or grain broken. The cylinder is considerably less in diameter than most machines in use, and has only about one-third as many spikes, but double the number in the concave, which admits of greater speed with the same power; it is also several inches longer, which gives ample room for feeding it to much better advantage. The separator has been sold with each thresher, and is considered indispensable, as it makes a perfect separation of the straw and grain, leaving the latter in the best possible condition for the fanning mill. Three men with a single power can thresh 75 to 100 bushels of wheat or rye, or four men with a double power 175 to 225 bushels of wheat or rye, or double that quantity of oats or buckwheat, per day; and with fanning mill attached to the power, and one man to attend it, the grain can be cleaned for market at the same time.

For further particulars see Descriptive Catalogue of Albany Ag. Warehouse and Seed Store, furnished gratis at the Store No. 10 & 12 Green-st., or by mail to post paid applicants. Feb. 1, 1848.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

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PHILADELPHIA—G. B. Zieber & Co., Booksellers:
Of whom single numbers, or complete sets of the back volumes. can always be obtained.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, MARCH, 1848. No. 3.

CULTURE OF INDIAN CORN.

EDITORS OF THE CULTIVATOR—It must be apparent to every one, that the aggregate value of the Corn Crop is immense to our country, and as almost every cultivator of the soil, throughout all its varied climate, and on all its variety of soils, is a grower of this crop to a greater or less extent, it becomes a matter of importance that it should be managed to the best advantage. I know of no better way to arrive at the desired result than the practical experience of successful corn-growers, made public through the columns of the agricultural press. We may all learn something from one another; indeed I never had a hired man even, in my life, however ignorant, that had not a way of his own of doing *something* from which I obtained a new and profitable idea. These considerations must be my apology for any apparent egotism in the frequent use of the personal pronoun in this communication.

I do not expect to add any thing new in information upon my present subject, which has been so often and so ably handled by others before me, but simply to show by what process I have been successful in raising much larger crops of corn to the acre than would be considered an average yield in this section, at least. The *average* yield of my corn crop, on 8 to 12 acres annually, has not fallen so low as 60 bushels per acre in 10 years, while in the more favorable seasons and on my best lands, it will come up to 80 to 90 bushels per acre. It is proper also to state, that some of the fields would not cut 500 lbs. of hay to the acre 10 years ago.

The land intended for corn is always broken up from 6 to 9 inches deep, varying with the quality of the soil, late in the fall, in order to that perfect pulverization of the soil which the frost of winter contributes so essentially to secure. The plowing is performed with great care and precision. No baulks—no crooked or imperfectly turned furrows are at all allowed, but the whole soil to the required depth is turned over. I have been troubled to find plows that do good work in a *deep* furrow—the Centre Draft and Eagle No. 2, a cut and description of which is given in the April number, vol. IV, of the Cultivator, turns a perfect furrow 8, 9 or 10 inches deep.

The heaps of compost manure are made up on this land in August or after, beds being plowed up to receive them. These heaps are ranged at convenient distances to load into the cart in the spring, and spread on the land with the best economy of travel, and contain 30 to 40 loads each, which is the quantity usually applied to the acre. Thirty-five to forty bushels is called a load. In the spring the manure is laid on the land in small heaps; the rows of heaps about four paces apart, and the heaps in the rows a little less distance apart, because a given number of loads, fine manure particularly, can be spread with more ease and expedition by making more heaps of a load, and placing them near together, than by following the more common practice of making larger heaps wider apart.

The harrow, going twice in a place, is started as soon as the workmen commence spreading the manure, in order that it shall be immediately incorporated with the soil without the loss of its valuable properties by evaporation, and also to divide and pulverize the soil above the sod, so that the plow afterwards may be used in a light furrow without disturbing it. Great improvements have been made in harrows by constructing them in two parts, connected together with hinges—the play, up or down, upon the hinges of either half, enables the harrow to adjust itself to the surface of the land in all places; and, whether smooth or uneven, it will always hug down close, and "keep digging." No farmer who has ever used a hinge harrow would be without one for five times the cost of making. When the harrowing is completed, the plow, with a sharp point, and a roller on the beam guaged to the proper depth, covers the manure 3 to 4 inches, which, after a trial of all ways, I consider about the right depth for fine compost.

The land is then furrowed out as nearly north and south as the shape and surface of the field will admit, and also east and west, the rows being 3½ feet apart each way. I prefer this distance to planting nearer. In my earlier farming operations, I used to plant corn considerably nearer both ways, of course growing a greater number of stalks and ears to the acre. In a favorable season, as to moisture, probably a few more bushels may be obtained by closer planting; but in offset the labor is also considerably increased. There are more hills to plant and hoe, and the ears being usually much smaller, the labor of husking a given number of bushels is greater, and no man can husk small ears and "nubbins" as fast as large ones. Besides, I find by actual experiment, that a closely planted field will not stand a drouth nearly as long as a field planted wider apart. Every stalk requires its due proportion of moisture from the earth in order to carry the ear of corn to full perfection, and of course the greater the number of stalks to the acre, the greater the draft upon the soil for moisture. In planting on a scale of 8 to 12 acres, therefore, I go for more space between the hills, notwithstanding there has been much said in favor of *shading the ground* by close planting, to prevent the effects of drouth. It is of considerable importance to have straight rows both ways, the use of the horse and cultivator being much more effective in this case than in crooked rows; besides, no farmer having a spark of honest pride, wishes to gaze all summer at so unsightly an object as crooked corn rows, or expose the same to the gaze of others.

In planting the corn, which is a nice operation, care is used to scatter it well in the hill, putting in 6 to 8 kernels. I always direct the planters to occupy 8 to 12 inches square with each hill. This may appear a small matter to some, but it is a fact that corn planted thus will ear heavier, and there will be more stalks bearing two good ears, than if the common practice of tumbling the corn into the hill at hap-hazard is pursued. Indeed one could better afford to pay a man two dollars a day to plant corn in the way I have recommended, than the common price, planted in the common way. The corn is covered at least 3 inches deep in sandy and gravelly soils, for two reasons. In this section of country we frequently have late spring frosts which nip the corn after it is up, and if covered but slightly the vitality of the tender plant is often destroyed by freezing down to the roots, whereas if covered 3 inches deep, no permanent injury is done. Again, we sometimes have dry weather about planting time, and if the earth drys down to the corn after it has sprouted, it may not come up at all; if it does it will be a long time about it, and at the end of three weeks will not be nearly as vigorous as that planted deeper. The seed is planted dry. I have tried a variety of steeps for seed corn, but have settled down to the impression that it is as well planted dry as any way. The most effectual "scare-crow" I have ever found, is a line of white twine strung round the field, and supported by long stakes.

In working the corn after it is up, the main dependance is upon the horse and cultivator. The construction of many of the cultivators in use is faulty. The upper part of the tooth is so short, and the frame work in consequence is brought so near the ground, that the implement goes bobbing about over the top of the weeds, clogging up with every impediment it meets—the weeds of course are not cut off or rooted up in a thorough or desirable manner, although I grant they are somewhat *mangled*. In a future communication I may give a drawing and description of a cultivator, made at my suggestion, by an ingenious blacksmith in this place, which is not liable to the above objections. At weeding time the horse and cultivator pass through the rows both ways, perfectly pulverizing and mellowing the soil, and as the rows are *always straight*, the soil is worked up close to the hills each way, rendering the labor of weeding with the hoe comparatively light. The corn is again worked both ways with the horse and cultivator at the second hoeing, the feeble stalks are pulled out, leaving 4 to 6 standing in a hill, and a broad, *flat* hill made. I find it cheaper for me, so far as labor is concerned, to earth up a little than to hoe perfectly level, and the hills being made broad and flat, it is, for anything I can discover, equally as well for the corn.

I never hoe but twice. Having plowed the land the previous autumn, nothing green started up before the winter set in, and the frost immediately following, the grass roots were killed. In the spring the land was well harrowed and plowed above the sod; there were no seeds of weeds in the manure, it being well fermented compost, and thus the work of the season was in a great measure *done* before the seed was planted. After the second hoeing the corn has the entire occupation of the ground, no further trouble being experienced from weeds of any kind. The thorough working of the land before planting, and also by the use of the horse and cultivator through straight rows *both ways*, at the first and second hoeing, has the further advantage of bringing the corn along through the fore part of the season with great rapidity, which is of essential importance, particularly in our northern latitudes.

There is no variety of corn that is not either improved or deteriorated by the manner in which the seed is selected. As soon as the earliest ears are thoroughly glazed, I go over the field, selecting those for seed that are early and vigorous, and from stalks producing *two good* ears. The corn is immediately braided up and hung in a dry, airy place. I have a kind of very long-eared, eight-rowed corn, which I have planted for several years, selecting the seed in the field each year in the way described, and which will yield a quarter more, the quality and cultivation of the land being the same, than it would when I began raising it—the corn is also at least ten days earlier in ripening. At first it was difficult to find double eared stalks, but now, it would seem to an observer in passing over the field, that a large proportion of the stalks produce twin ears measuring, the two together, 24 to 26 inches in length; many of the single ears will measure 14 or 15 inches long. Of course no kind of corn can produce to any extent, two ears upon a stalk, of this length, unless the land and cultivation are both good. It is to be hoped there is "a good time coming," when no land will be planted with this luxuriant grain that is not good, or *made good*, by the liberal management of its proprietor.

As my communication is already too long, I will say nothing at present of the various modes of harvesting the crop; perhaps, at some future time, I may do so, and if I should my remarks will show the results of some practical experiments which I have instituted.

F. HOLBROOK.

Brattleboro, Vt., Dec. 14, 1847.

The Farmer's Song.

My sturdy sons, bring forth the share,
All sharp to turn th' unfetter'd soil;
If we in autumn fain would bear
The golden sheaves, fear not the toil!

Those demagogues who strive for place,
And others chain'd to "glory's car,"
Fancy in *labor* there's disgrace,
And *honor* in inhuman war.

Not so, we reck our country's weal,
True honor lies in arts of peace,
We'll guard it with our hearts of steel,—
And *dig* to find the "golden fleece."

Nor while we till the teeming earth,
Let us forget that we are bound,
By all the blessings of our birth,
To strive that knowledge may abound.

What though the Spring to labor calls,
And Summer sees the forehead glow;
Autumn with plenty fills our halls—
In Winter pleasures overflow.

Then let us bless our happy state,
And yield to earth the seed and grain;
With grateful hearts we'll watch and wait,
"The early and the latter rain."

ALBANY, *March*, 1848. M. W. H.

SEA-COAST FARMS ENRICHED.—The committee of Barnstable Co. Ag. Society, state that John Doane has by skilful management, rendered his farm *five times* as productive of grain and grass, as it was when he purchased it 27 years ago. The soil was then exhausted, and most of it was thrown out to commons. It is generally sandy, and he has renovated it by plowing in sea-weed, and by making sea-weed compost in his barn-yard. Manure is the "beginning, middle, end," of all good farming.

NIAGARA SUSPENSION BRIDGE.—This is to be completed according to contract, in May, 1849. It is to be 1,100 feet long, and 230 feet above the water. Cost, $190,000. The wire cables are locked into the solid rock on each side, 100 feet below the surface, and will be strong enough to sustain 6,500 tons. If the bridge were densely crowded from one end to the other with heavy loaded teams, they would only weigh 300 tons, horses and all.

NOTES OF A TRAVELLER IN GREAT BRITAIN—No. 9.

There are in Wales many customs handed down from the remotest period. The girls, to this day, in many instances, perhaps one half, wear large beaver hats, like the men, instead of bonnets; though it is apparent the modern bonnet is making inroads everywhere on the steeple crowned beaver.

Milking Ewes.—I observed for the first time in Anglesea, the milking of ewes. They are kept in a flock, by themselves, and tethered with leather thongs, are driven into the yard at night, and the milk maid sits behind them, and soon performs her work. The quantity of milk I should think over a pint, usually—from this they ordinarily make cheese. I did not have an opportunity of testing its quality. Fuel is scarce, and turf fires are very common.

Oat cakes are among the principal articles used. A large griddle, from eighteen inches to two feet in diameter, is suspended in their deep, old fashioned fire places, and straw kindled under them, and the cakes, the whole size of the griddle, are very soon cooked, and they are laid upon poles suspended in the kitchen, where they roll up as they dry, and are used as they may be wanted. They are soaked in milk usually, and make a very palatable and highly nourishing diet. They keep a long time, and are used by the Welsh, when they cross the ocean, instead of sea biscuit.

The Welsh villages are built with low cottages of one story, the roof not more than seven feet from the ground, covered mostly with straw—the walls whitewashed. The streets are very narrow; and generally each village has some peculiar trade which is the leading branch of business. In one village, *LLanerchymdd*, (pronounced Clanerchymede,) I noticed an entire block of double houses occupied wholly by shoemakers, there being, I presume, from 80 to 100 shops.

Fairs.—I was present at several Welsh fairs. One at the village above-named, was for cattle, horses, and domestic animals. The stock was mostly black cattle, cows and lean cattle. They did not give evidence of all the superiority which I had anticipated from Anglesea cattle, still there were some very good animals. The horses were mostly farm horses, though there were a few good roadsters. Poultry, eggs, stockings, and domestic articles, were in abundance. The women had the entire charge of the cattle, leading them around, and making sales, using a language truly unintelligible to an American. The gathering of the people was large—girls, with their high crowned hats, in great numbers. Each swain took his damsel into the public houses, and here the scenes were far different from any often witnessed in this country. Desirous of seeing all that was going on, I went into these houses, where I found the girls being treated by their companions to gin, beer, porter, &c.; and I caused no little astonishment to many of the fair dames when, on being called on to partake with them, I declined. I found a great desire among these girls to come to America, and I had many offers from them to come over and work at my own price, to pay for their passage. Well might they desire it, as they seldom receive more than twenty dollars a year, and have to perform labor in the field in addition to their household duties, which cannot be of the easiest character.

The tenant farmers, who regulate the prices at these fairs, were present in considerable numbers; and they enjoyed themselves together with a very liberal supply of drinking materials, of a far better quality than that used in the tap-room. What a field is Wales for some Hawkins or Gough to lecture in! I was invited to talk in one of the parishes on temperance; but the number of those who could understand English well is comparatively few. At all these fairs, bankers attend to furnish money to the dealers, as the sales are almost invariably made for cash. Here was a small room, with a sign over the door, "Branch of the Bank of England."

Education.—Education is attended to among the Welsh, and very few are found who cannot read or write. I was amused with an English schoolmaster, whom I met at one of their villages, who was teacher for some private families. Learning I was from America, he was very free to converse upon his success in educating the Welsh. He spoke much of the deficiency of books for small scholars, and expressed much satisfaction that he had been so fortunate as to procure one of the most popular spelling-books from America, which exceeded everything he had ever heard of. "It was just the thing," he said, "and would make a great revolution in education." I supposed, of course, that either Noah Webster's, or Cobb's, or Lawrence's, or some of our widely circulated books, was the one he had so fortunately procured, and I asked him to show it me, when he presented me with the "Sunday School Spelling Book!"—a very good book indeed, but far less extensive than those named. Yet this was a great advance on the elementary works used. I found, on examining their works for small children, a very great deficiency in many parts of the kingdom. Their schools are frequently in towns, kept in dark, damp cellars, where the wonder is that they live long enough to learn anything. The teachers were frequently quite old men, and in many cases I found that if nature had been bountiful to them, education had not added very much in preparing them for their work.

I attended a fair at Holyhead, which is the extreme point of Anglesea, and the nearest port to Ireland, from which mail steamers ply daily to Dublin, about sixty miles. There was nothing especially different from the fair before alluded to. This is about eighty miles from Liverpool. A royal harbor is being built here which will enclose about 300 acres, and a railroad is in progress from Chester to Holyhead, which will open direct railway communication with London. The town is situated on a rocky prominence, and the railway passes through a tunnel under the whole town to the harbor. George the IV, on his return from a visit to Ireland during his reign, landed at Holyhead, and gave the name of the Royal Harbor to it, and some splendid memorials have been erected here to his Majesty. An extensive pier has been erected, which extends several hundred feet from the shore, from which the steamers start. A splendid arch is erected at the upper end of this pier, commemorative of the landing of his Majesty, which is a fine specimen of workmanship and design, with appropriate inscriptions. A short distance from the town, on a commanding eminence, overlooking the harbor and channel, is a very handsome pillar or monument erected, commemorating the same event.

Agricultural Societies, Premiums, &c.—Anglesea has an Agricultural Society which is doing much to improve the husbandry of the Island. Some of the premiums seem rather strange to Americans, but similar ones are given at many if not all the county associations. I give a few:

"To the male *servant* in husbandry, who has *served* the longest in one place, the time being not less than 10 years—3 sovereigns.

" To the female servant who has served not less than 10 years—2 sovereigns."

On first reading the above one would be led to suppose, that premiums might as well be given to the servile laborers on our southern plantations, who have faithfully *served their masters*.

There are some premiums given that result in much good—

" To the overseers of the high roads in each of the hundreds of the county of Anglesea, who shall have repaired the roads within their parish in the most judicious manner—2 sovereigns."

" To the cottager, being an agricultural laborer, by whom the greatest number of legitimate children, exceeding 14 years of age, shall have been brought up in habits of industry, without parochial assistance—3 sovereigns."

Some of the premiums awarded were—" To Robert Davies, a laborer in husbandry at Rhosbeirio and at Lodge Manachdy, having faithfully served 43 years—3 sovereigns. To Ellen Williams, having faithfully served at Pentraeth, for 20 years—2 sovereigns." H.

"RUNNING OUT OF VARIETIES—CHANGE OF SEED."

Messrs. Editors—Under the above caption, in the last December number of the Cultivator, you express the belief, that plants and vegetables do not degenerate, and that to propagate and continue them in perfection, a change of seed is not necessary. On the contrary, I had supposed that the science of botany and vegetable physiology had established the fact beyond controversy, that " any plant continually reproduced from the same seed on the same soil, will continually degenerate till it becomes extinct." And this important truth, in its application particularly to the potato, has been supported, if I mistake not, by the decided opinion of naturalists who have at all investigated the subject, and by the concurrent testimony of history for the last 150 years. If you will permit a little discussion of the subject, I trust, in case we do not come to the same conclusion, we shall amicably agree to differ; and as it is one that has an important practical bearing, an exhibition of some of the facts within our reach may do some good. It is to be deeply regretted, that in our agricultural literature, we have no full history of the potato. There are many facts regarding it recorded in the treatises of Humboldt and Sir Joseph Banks; in the Edinburgh Encyclopædia, and in many English works of the last century; but such a history as the importance of the subject demands, tracing its propagation, changes, diseases, failures, and reproduction in different countries, is yet a desideratum; and he would be a public benefactor who should prepare it.

I would premise, that an occasional instance of success or failure proves nothing; it may be only an exception to the general rule. So if Mr. Cooper's case, upon which you comment, varies from the general law of nature, it affords but one fact against thousands on the other side. But Mr. Cooper fully admits that potatoes do degenerate, and attributes it to the use of poor seed, and describes one way in which farmers may obtain good seed. That farmers, as he asserts, generally plant their poorest potatoes, I do not believe to be true; in an intercourse among them of more than forty years, accompanied with much observation, I have found such cases to be the rare exception to their general practice. And yet a number of varieties have run out within the last fifty years, and several others, recently in high repute, are fast failing, and have nearly ceased to produce balls. The present disease in the potato was generally first noticed in this country in 1843. Soon after that the agricultural census of this State was taken, which showed that the average product of the potato was only 90 bushels per acre—not half what it was 25 years ago; and that there had been a falling off of the potato crop in the State of upwards of six millions of bushels since 1840. See Cultivator, 1846, page 179. A similar decrease was shown in Massachusetts and in Maine, where the average crop had formerly been 200 bushels per acre. How is this to be accounted for, but by supposing a general degenracy of the varieties now in use? A corresponding decrease in the crop is exhibited in the history of the plant in other countries and at other times. In a report made to the Royal Society of Agriculture in France in 1819, by M. Le Comte de Neufchateau, Minister of the Interior, respecting the labors of Oberlin in the Ban de la Roche, a district of highlands in the east of France, it is stated that " the potato had been introduced after the terrible scarcity of 1709." But in 1757, " the original plant of the potato had degenerated to such a point as to yield scarcely any increase." To remedy this defect, recourse was had not only to the seed balls, but M. Oberlin " imported from different countries a store of potatoes which replaced those degenerated; and these new productions continue in great demand at Strasburg market on account of their excellent quality."

The potato appears to have been introduced from America into England first by Sir John Hawkins in 1545. Others were carried there in 1573 by Sir Francis Drake; and others again by Sir Walter Raleigh in 1586, who, in 1610, sent some to be planted on his estates in Ireland. They were first cultivated as a field crop in Lancashire in 1684, before which time they were confined to gardens, and only used occasionally by the most wealthy. To Lancashire the field culture was confined many years before it was extended much to other counties; but in the early part of the last century, the cultivation of it became general in Ireland and Scotland. In Lancashire the discovery seems to have been first made, that the potato, by continued cultivation, became deteriorated both in quantity and quality, and the practice was adopted there, and simultaneously in Ireland, of renewing the root or tuber by planting the seed balls. This continued to be the practice among farmers through the whole of the last century, and during that time hundreds of varieties, that were good for a time, and are named in English treatises on the potato, entirely run out. " Farmers," says a standard writer in 1797, " hold it to be necessary to renew the potatoes from the seed once in 14 or 15 years; because, after that period, potatoes degenerate, and produce less and less, till they almost come to nothing." Judge Buel, in an essay, remarks:—" The duration of a variety in perfection, is generally computed at from fourteen to twenty years, though this period is sometimes prolonged by a change of soil or climate." The tendency to degenerate was not a mere opinion, but a fixed fact, attested by the general observation and experience of farmers. It was the same in various parts of Germany, and particularly in Nova Scotia, where the finest potatoes were formerly grown. In that Province little reliance is placed on the introduction of tubers from abroad; their experience tells them, that a reproduction from the seed balls is the most sure and profitable. And in no part of the world, probably, has this reproduction been resorted to oftener than there.

Mr. T. A. Knight, the former distinguished President of the London Horticultural Society, experimented with the potato many years, and in fact made it a particular subject of investigation during his life. In a treatise in the British Farmer's Magazine, he says:—"The first point to which I wish to direct the attention of the cultivator of the potato is, *the age of the variety;* for it has long been known, that *every variety cultivated, gradually becomes debilitated; and loses a large portion of its powers of producing; and I believe that almost every variety now cultivated in this and the adjoining counties, has long since passed the period of its age, which it ought to have resigned its place to a succession.*"

Similar to the above is the language used in the Library of Useful Knowledge, Farmer's Series—"It has been ascertained by repeated trials, that every variety of the potato, when propagated during a series of years, either by cuttings from the root, or by the whole tubers, is subject to degenerate; in some, the quality remaining good after the produce in quantity has become defective, whilst with others it disappears with the vigor of the plant."

In the year 1778, a disease called the *curl*, affecting both the vine and tuber, appeared among several varieties of potatoes in England, and soon spread through Scotland and Ireland, and subsequently developed itself more or less in this country. It occasioned a general panic, as much perhaps, as the disease that has made such havoc for a few years past; and the multitude of books and pamphlets that were written on the subject, was beyond all precedent. Scientific men engaged in a great variety of experiments, and Parliament ordered investigations, &c.; but nothing absolutely conclusive was ascertained as to the nature or cause of the disease, or the proper remedy. The more general belief seemed to be, that the disease was more or less induced by the age or deterioration of varieties, as those more recently produced from the seed were almost wholly exempt. As the result of experiments, it was ascertained that varieties differed greatly in their nutritive properties—from 30 to 50 per cent.; that they also differed greatly in their vital energy and hardiness of constitution, some of equal age running out much sooner than others; and that the continuance of a variety and its exemption from, or power to resist disease, depended as much upon the above circumstances as upon its age.

Willis Gaylord, I think, (see Cultivator vol. 7, page 165,) expresses the belief, that "the formidable disease known as the curl, is the natural result of the old age of the variety, and indicates the failure of its vegetative powers." "The new varieties of this valuable root, those lately originated from seeds, have not, to our knowledge, been affected by the curl in the least. The inference, then, seems to be a fair one, that in the production of the potato, as in many other plants, a recurrence to the fundamental law of propagation, that from seeds, must be occasionally resorted to, in order to prevent deterioration. The new varieties of the potato, that have been introduced into culture in England and in the United States, from the seeds, exhibit a vigor and strength which none of the long cultivated kinds show." This last mentioned fact is confirmed by the statements of many English and American writers, and abundantly verified by experiments frequently made. In my reading, I have met with many passages similar to the following, which I extract from the Pennsylvania Farmer, published in 1804. Speaking of a field of potatoes raised from the seed, Eli Bronson, of Conn., says:—"Part of the field was better by one-half than the other part. In the best part, the seed was the second year from the balls; in the other part the seed potatoes were from the balls several years before, and had been planted yearly."

One of the most valuable communications respecting the potato, is found in Mr. Ellsworth's report from the Patent Office in 1844. M. Standinger, who had resided at Gros Flotbeck, near Hamburg, in Germany, near 50 years, paid great attention to the potato, and cultivated from the balls for *thirty-six years in succession.* His long experience and constant intercourse with practical men, and his habits of observation, give peculiar weight to his testimony. In view of the weakness in the vital energy of the plant, occasioned, he says, by constantly planting the tubers, he urges the importance of often raising new varieties from the seed; adding, that those grown from the seed balls have a more vigorous growth than those obtained from bulbs, that have been used for seed for some years. His practice, which he minutely details, enabled him to raise as large a crop, both as to weight and measure, the first year from the seed, as could be obtained by planting the bulbs. The opinion of the farmers, that it requires three or four years to bring to maturity and to a large size, potatoes raised from the seed, he considers not well founded, and attributes it to their unskilful method of cultivating them. And in relation to the disease among potatoes, that has spread over Europe the last few years, he expresses his belief that it is owing to degeneracy in the plant, and that the only effectual remedy is to start new varieties from the seed. In proof of this, he states "*that in the neighborhood of Hamburg, as well as also in Holstein, there is not the slightest trace of this disease to be seen, and no complaint of it has ever been heard; the reason of this being, that in the vicinityof Hamburg, there is always an opportunity of obtaining good seed potatoes,*" *&c.*

I did not intend, Messrs. Editors, to make any remarks about the cause or remedy of the present widespread disease in the potato; *that* I consider a distinct question from the one I had in view, and will leave it to be elucidated by other pens. That the older varieties of the potato are fast failing, and can be replaced only by renewing them from the seed; that the potato is susceptible of progressive improvement, so that there is reason to believe, varieties may hereafter be produced far superior in every desirable quality to any yet known; that a large crop, of good size for the table, may be raised from the seed the first year, so as to render it profitable to the grower; and that such seedlings, as a general rule, do remain, fair and sound, while nearly all the old varieties are more or less diseased and running out, I consider facts well established. These facts have had a living illustration under my own eye during the last few years, while I have witnessed the operations and success of a neighbor, who has obtained the premium for the best and greatest variety of seedling potatoes at the last two Fairs of the State Agricultural Society. While I witness such facts, developed by persevering, well directed labor, I predict with confidence, that the potato will, or may, be perpetuated as long as seed-time and harvest shall endure. H. A. PARSONS.

Buffalo, Jan. 4, 1848.

PLOWING FOR WHEAT.—Elias Cost, of Ontario co., N. Y., is very successful in raising wheat, by preparing his fallows with a *singleplowing*—sometime during summer—all the rest of the mellowing and weed-killing being done with a two-horse cultivator. The wheat is covered after sowing, by passing the cultivator but once over it. A strip 6 ft. wide is then covered at a time. The soil is not heavy.

CULTIVATION OF ONIONS.

THE cultivation of onions is in many sections an important business. In some parts of Connecticut, Massachusetts, and other places, they are raised in large quantities, and disposed of both for home consumption and for exportation. As we have had many inquiries in regard to the culture of this vegetable, we think we cannot give the information desired in a better manner than it is embodied in the following essay, which was written by JOHN W. PROCTOR, Esq., and received a premium from the Essex (Mass.) Ag. Society. At our request Mr. P. has furnished a drawing of the "Onion Hoe," which has enabled us to give a cut and description of the implement in connexion with the essay:—

The culture of onions has increased so much, within a few years, in this vicinity, that it has become one of the staple products of the county. In the town of Danvers, more money is realized from the sale of the onion, than in any other product of the soil. Products of so much value, and commanding so much attention, are fit subjects of inquiry; and if there be any facts relating to their cultivation not generally known, it may be useful to have them brought forward.

In making these inquiries, our attention has been directed almost entirely to practical cultivators, without reference to scientific treatises. Our intention being to tell their story, as near as possible, in their own way.

We shall treat of the subject in the following order:

1. The preparation of the land.
2. The manure best adapted to promote the growth.
3. The raising and planting of the seed.
4. The care necessary to be applied while growing.
5. The blights and injuries to which the crop may be liable.
6. The time and manner of harvesting.

1. As to the preparation of the land.

Differing from most other crops, the onion grows well on the same land for an indefinite number of years. Instances of continued appropriation of the same pieces of land to the growing of onions, for *ten, fifteen, twenty*, and even *thirty years*, have come to our knowledge. It is the opinion of many that crop is better, after the land has been thus used a few years, than at first. Whether this arises from any influence of the crop upon the soil, or is the effect of continued dressing of manures, we have no means of determining. This is certain, that the qualities of the soil necessary for the production of good crops are not exhausted by continued cultivation.

Rarely, if ever, have we known the onion sowed upon the turf when first turned over. It is usual to subdue and pulverize the soil, by the cultivation of corn, or some other crop. Not unfrequently the first year with corn, the second with carrots, and afterwards with onions. It is important, before the seed is sown, that the surface be mellow, finely pulverized, and clear of stones or other impediments, to the free and unobstructed use of the machine for this purpose. The finer and more uniformly mellow the surface is made, the better. Shallow plowing, say from four to six inches deep, is usually practiced. Once plowing only in the spring, and frequent harrowings, are practiced. Before the plowing, the dressing is usually spread upon the surface of the field, so as to be covered or intermixed in the furrow. The mingling and subdivision of it, is effected by the use of the harrow.

Whether it would not be advantageous occasionally, to stir the land to the full depth of the soil, is a point on which there is a difference of opinion; most of the cultivators inclining to the use of shallow plowing only. There are some facts tending to show, that occasional deep stirring of the soil does no harm to the onion crop, but on the contrary is decidedly beneficial. As for instance, onions do better where carrots have grown the year preceding, than after any other crop. The carrot necessarily starts the soil to the depth of ten or twelve inches. Possibly there may some other influence upon the soil from the plant itself. Our belief is, that the thorough and deep stirring of it, is the principal preparatory benefit.

2. The manure best adapted to promote the growth.

Any strong manure, well rotted and finely subdivided will answer. But the general impression seems to be, that manure from stables, where the horses are freely fed with grain, is the best; and that it should be at least one year old, because it will not be sufficiently rotten in a less time. All agree that the dressing for the land should be kept near the surface, well mixed, and as fine as possible. Though we have seen the present year a very superior growth of onions, where green manure from the barn-yard was applied in the spring; but particular pains were taken to subdivide and intermingle it with the soil; and to bush-harrow the land so thoroughly, that very little manure was exposed upon the surface,

Muscle-bed is frequently used upon onion land. A portion of this is deemed by some almost indispensable. We have known the continued use for half a dozen years in succession, even without other manures, with a continuation of fair crops; but the general impression is, that it will not do to repeat the application of muscle-bed many years in succession. The effect being to harden the land, and make too much of a crust about the surface. Without question the effect of the muscle-bed is congenial to the growth of the onion, giving those who live in the vicinity of rivers where it is found, a special advantage over those who are remote from it.

Leached ashes are also a valuable manure in the cultivation of the onion; more so when *leached* than before. All kinds of ashes are advantageously applied on onion land.

Compost manure made of meadow mud and droppings from the cattle, we have known advantageously applied on onion fields; but we have many doubts as to this being the best application of this kind of manure. A more lively and quickly operating manure is better for the onion; one that will give them an early start, and advance them as fast as possible, in the first part of the season. The utmost vigilance and activity is used by our cultivators in getting their land ready, at an early period of the season, for the reception of the seed. It is the first field labor of the spring. The use of compost manure will depend much upon the constituents of the soil with which it is mixed. If the soil be a sandy loam, with a porous subsoil, the compost will do tolerably well; but if it be a black soil, with a clayey subsoil, such as are most of the lands where onions are raised in this vicinity, stable manure, or muscle-bed, or leached ashes, or a mixture of these, will be a better application. The quantity ordinarily applied annually is from four to five cords to the acre. Whatever is applied should be generously applied. It will be vain to expect full crops of onions, without full manuring. When the manure is collected, it is benefitted much by a free application of *elbow grease* in its preparation. The cultivator of the onion must work early and late, and in good earnest. Nothing short of forcible and persevering labor will answer. No man who is afraid of *soiling his hands or the knees of his trowsers* will do to engage in this business. Close work at the proper time, is the only sure guarantee of a good crop.

3. The raising and planting of the seed.

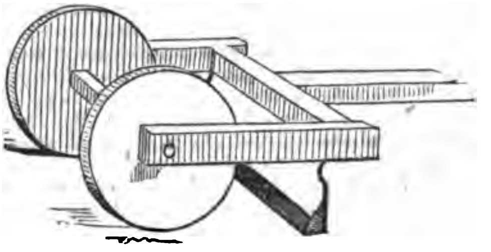
In relation to the onion, as well as all other vegetables, much care is necessary in the selection of the plants for seed, and the cultivation of the seed. By the application of this care, the character of the article raised may be modified almost at pleasure. Until within a few years the *flat onion*, hollow about the stem, has been preferred. The thinner the handsomer. But it is now understood, that the *round, thick, plump onion*, is preferable in many respects. It is thought to yield better, and weigh heavier. It is found to have a decided preference in the market, commanding *ten per cent.* more in price. By selecting those of most desirable form, which ripen the earliest, and carefully setting them for seed, where they will not be exposed to the impregnation of the baser sorts, the quality has been materially changed and improved. These peculiarities in the onion were first noticed in this vicinity by Mr. Daniel Buxton. He was careful to select in the field before the crop was gathered, such onions as he preferred, and to preserve them for seed.

By so doing, the seed which he raised soon acquired a character superior to any other. Many of those who had been accustomed to raise their own seed in the ordinary way, laid it aside, and purchased seed raised by Mr. Buxton, and found their account in so doing. There are three varieties of the onion raised in this vicinity—the *Silver-skin*, the *Red*, and the *White onion*. The *Silver-skin* is the predominant species, and more cultivated than all others. The *Red* is preferred by some—sells better in some foreign markets, but does not yield so abundantly. The *White onion* yields as well as either of the others, is milder and preferable for immediate use; it will not keep as well, and is not fit for exportation; which is the principal use made of our onions.

The common drill machine is used for the distribution of the seed. This admits of regulation, so as to scatter it more or less thick; and in this there is room for the application of sound judgment. The usual quantity sown is about three pounds to an acre. As a general rule, we should say, one pound of good seed was the proper quantity for a quarter of an acre of land of good quality well prepared. It is desirable to have the seed planted as thick as they will grow fairly, both to secure a full crop, and prevent the onion growing too large. Onions from one to two inches in diameter being preferred to those of a larger size. The skilful cultivator carefully looks after all these incidents relating to his crop.

4. The care necessary to be applied while growing.

Much of the success of the crop depends on this care. At first the plant is extremely tender, and requires to be handled with much caution. Any derangement of the fibres or roots of the young plant, is attended with prejudicial consequences. Much attention is necessary to prevent weeds gaining the ascendancy; and in eradicating the weeds. Want of due care in this is often the cause of failure of a crop. We have known the present season, a highly promising crop to be injured *twenty per cent.* at least, by permitting the weeds to remain unnoticed *one week too long*. This is especially true when there has been a want of due care in preventing the scattering of the seeds of the weeds on the land in the years preceding. Care should be taken, both that no weeds shall ripen their seed upon the land, and that no weed seed shall be found in the manure. In this respect, warm stable manure, muscle-bed, and ashes, have a decided superiority over all other manures. Perhaps there is no plant more liable to be injured by weeds than the onion. The fibres it sends out are very numerous, minute and tender; any fracture of any of these necessarily impairs the perfection of the plant. When the land is in the proper condition, two careful weedings are all that may be necessary. The rest of the stirring of the ground that may be required to promote the growth, can be done with the *Onion Hoe*, (fig. 22,) an instrument specially constructed for the purpose, moving on wheels, and adapted to the width of the rows. It is calculated to pass between the rows of onions—being either drawn or pushed. The wheels cover a space of about one foot in width, and the length of the cutting blade is also about a foot. The length of the handle is about five and a half feet. The usual distance between the rows is fourteen inches, and as the hoe takes a breadth of twelve inches, it cuts over all the ground, excepting a strip of two inches along each row. The cost of the hoe varies from $1.25 to $1.50. It was invented by Mr. Joseph Bushby, of Danvers, an intelligent and successful cultivator of garden vegetables, about 25 years since; and was used by himself and neighbors only for about ten years. It has now come into general use, and saves much of *back-aching labor*. The distance between the rows can be varied according to the quality and condition of the soil. Keeping the ground well stirred, loose, and free of weeds, greatly facilitates the bottoming of the onion. There is no plant that will better reward diligent care in the cultivation. The entire difference between a bountiful crop and no crop at all, often depends on this. The old maxim, "a stitch in time saves nine," applies with great force in raising onions.



Onion Hoe—Fig. 22.

5. The blights and injuries to which the crop may be subject.

So far as we have observed, this crop is as certain as any other that is cultivated. We know that onions will not grow without a reasonable proportion of heat and moisture; but we have rarely, if ever known, an entire failure of the crop, where due diligence has been used. There are occasionally blights, the causes of which we have not learned. The more prominent will be noticed.

Sometimes we have seen the plant covered with a small insect or *louse*, that gives the top a white or light colored aspect, and stops and stints the growth. These make their appearance about the time the bottoming commences. We have heard their appearance charged to the use of muscle-bed; but whether they are limited to land on which muscle-bed has been used, we cannot say. We think not. We think they are natural associates of the plant. The effect of them is to diminish the *quantity*, but not materially injure the *quality* of the vegetable.

The crop is sometimes injured by a *blue mould* that gathers on the tops, occasioned by fogs, or an excess of moisture from frequent and long continued rains.

There is a *worm* or *maggot*, occasionally found upon the onion plant, in the early stages of its growth, causing it to turn *yellow* and die. This insect will be found in the bulb, originating from eggs laid upon the leaves, by a small ash colored fly, the scientific name of which is said to be *Anthomyia ceparum*, (See Transactions of the N. Y. State Ag. Society for 1843, page 135.) It comes to maturity in less than a month; so that there may be several generations in the course of the season. Their appearance in this vicinity is rare. Pulverized charcoal and fire have been found the most effectual remedies, against the ravages of this class of depredators.

The most annoying enemy of the onion is the *cut worm* or *grub worm*. It probably is the same described by Dr. Harris, in his report on the Insects of Mass. injurious to vegetation, p. 324, there called "*Agrotis devastator*." And in the 1st vol. of Silliman's Journal of Science, "*Phalæna noctua devastator*;" though Dr. Harris does not mention the *onion* as among the plants upon which it feeds; probably considering it like *tobacco*, as *too noisome* to be used by any decently civilized being. They are said "to seek their food in the night, or in cloudy weather, and retire before sunrise into the ground, or beneath stones, or any substance which can shelter them from the rays of the sun; here they remain coiled up during the day, except while devouring their food, which they drag into their places of concealment." The remedy for these worms, suggested by our cultivators, corresponds nearly with that proposed by Mr. Foote, of Berkshire, "*to catch them and pull their teeth out*." This being effectually done to all, their operations will be of a limited character. When this is omitted, we have sometimes known whole fields almost entirely cut down by these rapacious devourers. They sweep clean where they go, not suffering even the weeds or any other herbage to flourish. They are more frequently found on *old* ground than on *new*; and particularly where the ground has been covered during the winter with *chickweed or other vegetable substance*, on which the eggs from which they originate may have been deposited. Hence a benefit of clearing the ground of all vegetable matter or other obstructions in the autumn, after the crop is gathered. This clearing also facilitates the early planting in the spring. Autumnal plowing, as it exposes the soil more fully to the action of the frost, and disarranges all abodes for the winter made by insects, may have a tendency to diminish their number.

6. The time and manner of harvesting.

When the tops begin to wither and fall, then it is usual to start the onions from their bed, and throw them together in rows—say eight or ten growing rows into one. After they have lain thus about one week, they are stirred and turned with a rake, and in about one week more, when the ground is dry, and the weather fair, they are gathered up by cart loads, and taken to the barn. Here they are sorted and cleared of refuse leaves, and then they are in a condition to be *bunched* or *barreled*.

It should be remarked, that a large part of the labor of *weeding*, *gathering* and *sorting* the onion, can be performed by children from *ten* to *sixteen* years of age. Boys of this age, when properly instructed, will do about as much as men. They are more nimble, and can come at the work with greater facility. The sorting of the onion is frequently done by girls as well as boys. From *three* to *five* dollars a week, at one cent a basket, are usually earned by them during the period of harvesting—which includes the months of September and October. After the crop is taken off, if the surface is sloping, it is useful to plow furrows about one rod apart, to keep the surface from washing. Unless this is done, all the herbage being gone, much of the soil will be likely to be misplaced, by the melting of snows and running of water in the spring.

The inquiry arises, whether the growth of the onion is limited to soils of particular character, or whether it can be cultivated upon any good soil, with proper attention. We know that there is a popular impression, that there are but few places in which the onion can be cultivated advantageously. So far as our own observation has extended, this impression is in a great measure erroneous. Like every other plant, the onion grows best on very good soils, in very good condition. But we have known very fair crops, on plain, light land, after the same was well saturated with *manure*, *muscle-bed* or *ashes*. A good substratum must be laid before a good crop can be expected; and this being done, a crop may be expected on almost any soil, that will support other vegetables.

If we were asked, what course is best to be pursued with land, on which onions have never been raised, to bring it into a condition for a successful cultivation of the crop, we should say—begin by plowing to the full depth of the nutritive soil, and during the first and second years, thoroughly subdue and mellow the soil by the cultivation of crops of corn and carrots, with liberal dressings of manure; then thoroughly incorporate with the soil a dressing of strong manure and muscle-bed, just covering this dressing; then harrow the surface thoroughly, and clear it of all roots, weeds, or othe obstructions; then apply a coating of lively, well rotted manure to the surface, and bush harrow it; and then it will be in a condition to receive the seed, which is to be inserted as soon as the opening of the spring will admit of its being done.

We are aware that we make the raising of the onion dependant upon severe labor and vigilant attention. We know that it cannot be successfully done without these. But it is not labor lost. No cultivation, within our observation, better repays for the labor and incidental expenses. We have known, the present season, acres that have yielded their owners a net income of more than *two hundred dollars*; and we know that a man with two boys can well attend to half a dozen acres of such cultivation. Surely, when as at present, there is no limit to the demand for the article, and a ready cash market, those who have *acres* and are willing to labor, need not be in want of a fair compensation for their labor.

As samples of the present years produce in the town of Danvers, we state the following that have come under our notice:

Names.	Acres.	Produce.	
John Peaslee,	3	1,980	bushels.
Daniel Osborn & Son,	1 1-5	870	"
James P. King,	1 1-3	660	"
Aaron C. Proctor,	1 1-4	600	"
E. & D. Buxton,	6 1-2	2,750	"
Henry Bushby,	4	2,000	"
Joseph Bushby,	3	1,500	"

Yielding an average of more than 500 bushels to the acre.

Potato Rot.—Though not always successful, the practice of *very early* planting appears to gain favor. The Morris Jerseyman says that a farmer planted his potatoes earlier than usual this season, which were dug and put into his cellar before the rains came on; and that they still remain perfectly sound. In Mississippi, the best result has been obtained by starting potatoes in hotbeds, and transplanting *slips* from them when three or four inches long—the original continuing to send forth fresh slips for a long time. We have raised potatoes ten days to two weeks earlier by placing the seed in winter in a warm place, so as to sprout them two inches by the very earliest day that the ground could be plowed to receive them.

Maple Sugar in Vermont.—The quantity of maple sugar made in Vermont in 1840, was 4,647,000 lbs.

REMARKS ON BREEDING HORSES—No. III.

EDITORS OF THE CULTIVATOR—In my first article I noticed four kinds of horses, viz: carriage horses—saddle horses—trotting horses and draught horses. I concluded my last article with a few observations on trotting horses. Before proceeding to remark on draught horses, I would introduce another, perhaps a distinct stock of horses—one at least that does not come under either of the heads above named—I refer to such as are generally used to promiscuous service, and prized chiefly for their performance on the road—called in this country I believe, "horses of all work," in England, "hackneys."

Youatt represents the hackney as a horse that should not exceed fifteen hands and an inch in height—thinks he would be sufficiently strong, and more pleasant for general use, below that standard. The bones below the knee, he says, should be deep and flat, and the tendon not tied in—the pastern should be short, and although oblique or slanting, yet far less so than that of the race horse. Their feet should be of a size corresponding with the bulk of the animal, neither too hollow or too flat—the fore legs should be perfectly straight; the back should be straight and short—the forehand high—the barrel round and the chest deep.

I think we have no horses in our country that answer this description better than the Morgans. About the origin of these, there is much disagreement. Their most ardent admirers seem much concerned to prove that they sprung from a lucky cross of an English thoroughbred and a Yankee mare. But the more prevalent opinion is, that they have from the first, been strongly impregnated with French or Norman blood. And I am free to say that after careful examination of several specimens of the breed, and after reading all, or nearly all that has been claimed by their owners and admirers, I have adopted the more prevalent opinion. It is possible indeed, that the strain of Norman blood was originally derived, through their dam, from the descendants of Norfolk or Suffolk horses, imported at an early day by the New England Colonists; though it is much easier to believe that it came from Canadian mares. But from whatever source it may have been derived, that they have it and had it, I fully believe.

It is perhaps proper to say that my opinion as to the origin of these horses has been strongly biassed by the present appearance of their descendants; and it is possible the mixture of French blood has been wholly acquired by the later generations, and is the result of negligence in breeding. However, I consider this of minor importance; I do not think the less of the horses because I believe they originated in the cross with the Normans—nor do I think their friends need disclaim it so strenuously; especially as it is generally conceded, that they are a distinct and a valuable stock of horses.

It cannot be denied that they possess great energy and courage—great strength and endurance—great ambition and great docility; that they mature early and are easily kept; that they are pleasant drivers and always ready for business, and what is more important, they sell readily at high prices—still I cannot bestow upon them the unqualified praise they have so often received. They are not the style of horses I most admire, or that I would take the most pride in breeding. Driven in spans to light wagons, they certainly are dapper little animals, and in that capacity all that could be desired—but in other departments of service, I think they have many superiors. If for instance I wanted an elegant carriage or single horse for light and rapid driving as well as for family use, and occasional labor on my farm, I would greatly prefer one of the early descendants of Duroc or Messenger, of Mambrino or Bellfounder, not that they are more hardy or stronger or even fleeter, perhaps, but because they had a nobler appearance, greater symmetry of form, a more graceful, as well as a more majestic carriage, more of those commanding features, usually ascribed to the noblest specimens of their race. This of course is a mere matter of individual taste, to be approved or rejected as the reader may incline.

I am well aware that the Morgan horse has been much admired for his style of action. Indeed I think this is one of the points, in which it is claimed by his friends that he excels all others, and perhaps my exception to this opinion will be received with great surprise. But I really think I have never seen a Morgan horse that I considered either a graceful or a stately mover; I have seen many that were full of show and action, pompous little creatures, almost bursting with zeal and animation, but with such broad breasts and bantam figures, as to give their gait too much the appearance of a strut or waddle, reminding me somewhat of the little coxcomb, who, as he parades the street, swings his arms and stretches back his head, and impudently looks every person in the face, as if to say—"You must not presume to think me small!"

In answer to this it may be said, that the great endurance of the Morgan horse, upon the road; the facility with which he performs long journeys, &c., is sufficient evidence that his motion is graceful and easy, for it is seldom indeed that a horse with labored action, is capable of making long and rapid journeys; very true; but I think the endurance of the Morgan horse (sometimes overrated I suspect) is attributable more to his great vital energy and muscular development, than to his easy paces.

Again, symmetry of form is claimed as a prominent excellency of the Morgan horses, but I must except to this opinion also. I think their legs are too short for their length of neck and bulk of body. They are generally too wide forward and too close behind, so that many of them *paddle* with their fore feet, and at the same time unless carefully shod, interfere with their hind ones. Some of them also incline too much to hollow back. But I need not say more, unless it be to repeat the remark that the most of these objections are too exclusively matters of taste to bear much disputation. It may be proper also to add, that in my opinion of the Morgan horse, I do not think I am sustained by the public at large, and that there are many men, better judges of horses than I, who would much prefer a genuine, well selected Morgan horse to any other that could be procured.

As to the breeding of Morgan horses, I would strenuously advise an immediate return to thorough-bred families, from which it is claimed they originated. They have been bred too long on common stock. I am confident that much of their original superiority may be reclaimed by a judicious crossing with higher bred animals, and to effect their improvement I would much prefer to breed from Morgan mares to thorough bred stallions, than from Morgan stallions to thorough bred mares; because as far as my observation extends, whenever it is sought to mix a strain of Norman blood in that of the Arabian or English race horse, it should be through the dam rather than the sire. I believe there are very few instances where valuable stock has been produced by Morgan horses and highly bred mares, but there have been many successful crosses of Norman or Canadian mares to thorough-bred stallions.

In breeding from Morgan stallions, I believe it is generally admitted, that mares with a cross of Canadian blood should be avoided, at least this is the experience of Mr. Thurston, the former owner of the Black Hawk Morgan, he having observed that colts got by Black Hawk on mares tinctured with Canadian blood, are generally inferior to those got on other mares. A clear indication that the stock has gone far enough in that direction.

It may be objected to my articles, that I having been striving to turn everything back to thorough-bred* families,—whereas it has been advised by better authority, that "the best course for improving our horses" is to direct our efforts more exclusively to the various families of grade and native stock that have been long approved in our country, and breed each kind within itself, until its peculiar characteristics are fully and permanently developed, with a view I suppose of gratifying our national vanity, by establishing breeds of our own, such as we can claim to be distinctively American, or forsooth *Republican*. But I am quite sure that such a course would not be recommended for breeding sheep or cattle—it would not be politic, inasmuch as there are many very wealthy, influential and philanthropic men in our country, engaged in breeding English stock. Neither would it be popular inasmuch as it has been well settled than in all attempts to improve sheep or cattle, *none but thorough-bred males* should be employed. Besides it is well known that it cost Bakewell the labor of a lifetime and a large fortune to establish a single breed of sheep—and the Messrs. Colling much the same, simply to improve a breed of cattle. But if such a course is not advisable in breeding cattle, of which we have native breeds, thought by many to be superior in some respects, to the English—why should it be adopted in breeding horses of which we have no native families worth perpetuating. Most of the horses, we have ever had that were of any value, were derived from foreign sources; and most of those that remain are but degenerate descendants of imported thorough-breds. To breed these within themselves therefore, with a view "to insure uniformity of character," would be only to breed them farther down in their course of degeneration, and instead of insuring "uniformity of character," would be only insuring uniformity of defects and making them, in the end, utterly worthless. It is impossible to breed them *up*, or towards their former standard, without going back to the place where they began to degenerate—or in other words, without returning to the thorough-bred families from which they sprung.

I have also through the entire course of these articles, advocated the breeding of horses separately, with reference to different departments of service. I have done so, because I think every breeder should have a definite object in view. If he breeds for a combination of characteristics, he will in all probability become confused, and get only an unworthy mongrel.

If we aim to breed elegant carriage and saddle and trotting horses, we will, no doubt, produce a sufficient number of hackneys or "horses of all work," in spite of ourselves. But if we aim only at producing hackneys or "horses of all work," there is danger that the result of our labors will be but a multiplication of indifferent or worthless animals, already too numerous in our country.

I had intended to make some remarks on draught horses, but this article has become so long, that I am sure your readers will gladly excuse me.

Syracuse, Feb. 1848. JOHN BARBER BURNET.

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* By thoroughbreds we generally mean, the English race horse, the Barb, the Arabian, and their lineal descendants.

Diseases of Animals, &c.

Scours in Swine.

It is frequently remarked that it is useless to attempt to cure sick hogs, and to the prevalence of this opinion is to be attributed in a great degree no doubt, that want of effort which results in the loss of so many of these valuable domestic animals. In June last, I observed that one of my hogs manifested an indisposition to eat. I paid not much attention to him for a few days, when again noticing him, I saw that he had failed in flesh considerably. He was then put in a pen by himself, and I soon found that he had the scours very badly. His appetite decreased to such a degree, that a gill of corn was more than he would eat in a day, while the complaint continued to increase. I tried different remedies without effect, when, as a last resort, I had recourse to the Cultivator for information. Among various cures for this complaint in *calves*, (I saw none for swine) I noticed that *calomel* had been given with good effect. I procured about 30 grains, which quantity was given in two doses in the course of a day. He soon manifested favorable symptoms, and showed a disposition for food. He was fed with sweet milk, boiled and thickened with flour, until cured. I would say in conclusion, that I think the information I got from the Cultivator, in this one case, saved me more than its cost for a dozen years at least; and as a testimony of the regard I have for your paper, I send you the price of eighteen copies for the present year—most of which are for new subscribers. A. D. *Princeton, N. J., Jan.* 12, 1848.

"Tail Sickness."

The tails of cattle sometimes increase in length to an inordinate degree. There is a popular belief that this elongation of the tail injuriously affects the animal's health. Youatt, Dick, and some other veterinarians, ridicule the idea of any disease being brought on by this cause. They admit, however, that letting blood by cutting off the tail, may in some cases afford relief to animals suffering from diseases brought on in various ways; but they hold that the same benefit would follow from taking the same quantity of blood from any other part. We presume that the amputation of an inch of the tail, has but little effect in any way, excepting that suggested by the writers referred to. Formerly it was the belief that the *palsy* in cattle was caused by "tail sickness," and superstitious people in some instances resorted to a *charm* to effect a cure. A piece of turf on which the animal had trodden was hung on a stake, accompanied by incantations, and a "black cat" was made to pass three times around the cow's body, "over the back and under the belly." If the cat struggled and scratched smartly, she generally got away by the time she had been round three times, and the necromancers were convinced that the bewitching devil had passed into her.

REMEDY FOR WINTER-KILL.—A correspondent of the Ohio Cultivator, gives the following preventive of *winter-killing* in cattle, hogs, and sheep, many often dying during winter and early spring:—

R.—Good shelter-um, q. s. (*quantum sufficit.*)
Corn-meal-um, q. s.
Clear water-um, q. s.

The "*corn-meal-um*" to be made into a poultice, and kept constantly applied to the mucous membrane of the stomach. [For the benefit of strictly professional men, the above may be given as follows:—

R.—Refug. opt. q. s.
Zea pulv. q. s.
Aq. font. q. s.]

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Transactions of the Ohio Nurserymen and Fruit Growers' Convention, *held at Columbus, September 29th and 30th,* 1847. 8 vo. pamphlet, 46 pages.

The state of Ohio, in many respects a fine fruit country, has been rather remarkable for the confusion of the names of its apples. Besides its native fruits, many new names have been applied to old varieties introduced from different sources, at an early period. More lately these were nearly all supposed to be new varieties of high merit. Recent investigations have restored in many cases the original and true name; in this way the Putnam Russet has been found to be the old Roxbury Russet; the Little Pearmain, Bullock's Pippin; the White Pippin, Canadian Reinette; Red Romanite, the Carthouse or Gilpin; Oxeye, the Vandervere, &c.

In order to reduce this chaos to order, as well as bring out the finest native varieties, a Fruit Convention was held in central Ohio, and the results of its deliberations are given in the valuable pamphlet before us. For copies, we are indebted to M. B. Bateham and F. R. Elliott, secretaries, by the latter of whom it was chiefly prepared for the press, and whose extensive acquaintance with eastern and western fruits, has eminently qualified him to throw light upon the subject.

The present work contains outline figures of the Early Harvest, Tart Bough, (a sub-variety of the Early Harvest, but three weeks later,) Early Strawberry, Early Pennock, Roxbury Russet, Cooper Apple, Willow Twig, Wells Apple, Raules' Jennett, Western Spy, Phillips' Sweeting, and Ohio Nonpareil; the seven last are believed to be western varieties. A very large number of others are noticed, and some of them described. There are also figures and descriptions of seven new and fine varieties of cherry, originated by Dr. Kirtland of Cleaveland—making 19 figures in all. There are also notices of several known varieties of pears and some other fruits, which were exhibited to the Convention.

This cannot fail to be a very interesting work to every amateur in the country; and to every nurseryman and fruit raiser in Ohio, it must be invaluable. It is sold at the office of the Ohio Cultivator, Columbus, for 25 cts. per copy, or $1 for five copies.

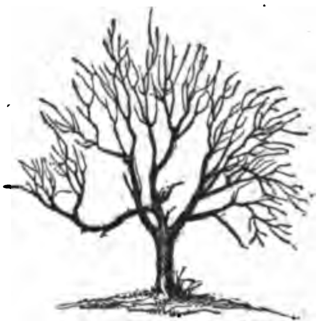
A large field remains open for future labor, and a permanent State Fruit Committee was appointed, and another Convention is to be held next autumn.

Management of Fruit Trees, &c.—Timely Hints.

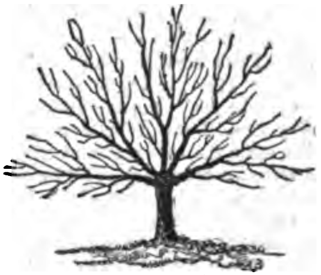
Pruning.—Every cultivator of fruit should thoroughly examine his orchard and fruit garden, before he is interrupted by the approaching busy season. Those who have large trees should give them the necessary pruning. A slight trimming every year or two, is much better than the more frequent practice of heavy pruning after years of neglect.

The work should be done as early in the month as possible, that the wounds may become well dried before the sap flows. There is more judgment and care needed in pruning large trees than in any other part of their management. The operator should constantly bear in mind, that a neat, handsome head is to be preserved; that the best shaped and most thrifty branches are to be left; and that the light of the sun should be admitted as far as practicable to all parts of the tree. A thrifty growth of the branches will thus be kept up; and in connexion with good cultivation of the soil, the fruit will possess the large size, and fine flavor and appearance, so eminently desirable, and usually seen on young trees. The advantages of admitting the sunlight must be obvious to every one who has noticed the difference between the rich flavor of fruit fully exposed to the solar rays, and that which has grown under a thick mass of branches and leaves. Indeed, so important is this influence, that the exposed side of an apple is often found much richer in flavor than the shaded side—the rich acid of the Esopus Spitzenburgh, and the sugary sweetness of the Tallman Sweeting, are most strikingly observable under the dark red surface of the one, and brown sunny cheek of the other.

Large wounds made in pruning, should be protected by a suitable air-tight and water-proof coating, otherwise they will dry and crack, admit rain, and finally become diseased from decay. The cheapest good coating is a mixture of tar and brick-dust, applied hot; the best and neatest, is a thick solution of gum shellac in alcohol, kept corked tight, and applied with a brush.



A neglected and unpruned Peach Tree.
Fig. 23.



A properly pruned Peach Tree.—Fig. 24.

Pruning Peach Trees.—Pruning the peach is very little practiced, simply because its great advantages are generally unknown. Most cultivators, however, must have noticed the great difference in the size of the peaches, and still more in their quality, grown in one case upon young and thrifty trees, and in the other, on old and stunted ones. Old trees might be rendered thrifty, and productive of large delicious fruit, if a regular system of pruning were kept up. The tendency in the growth of this tree, when neglected, is to form long and bare branches, with leaves and fruit only at the extremities, shutting out the light from the rest of the tree, and attended with slow and diminutive growth. Judicious pruning, by shortening-in, commenced while the tree is yet young, and continued yearly, will preserve a round, handsome head to the tree, and young and thrifty shoots will start from all parts of the branches, even down to their very commencement, at the upper extremity of the trunk. Old trees have, in some instances, been much benefitted even by the rough and unskilful trimming by the winds, and new and healthy branches have sprung up and borne finely on old and stunted trees, which had been thus accidentally relieved of a part of their useless limbs. A. J. Downing says:—"We have seen two peach trees of the same age side by side, one unpruned, and the other regularly *shortened-in*, and both bearing about four bushels. The fruit of the latter was, however, of double the size, and incomparably finer." A similar experiment, made the past season by the writer, was attended with quite as great success. Fig. 23 represents a neglected and unpruned peach tree, the leaves and fruit being at the ends of the branches. Fig. 24 is a tree properly pruned, so as to admit light to all parts. The pruning should be done early in the month.

Raspberries.—These should be pruned as soon as the surface of the ground becomes thawed in spring. All the old stems, and all the smaller young shoots, should be cleared away to the ground, and about half a dozen of the largest stems of last year's growth left for bearing. Their upper extremities for a foot or two should be cut off, being weak and useless, and detrimental from their weight and shade. The remaining stems, if not of a stiff and upright variety, should be loosely tied to stakes.

Hardy Grapes need pruning early, before the sap flows and *bleeding* commences. A moderate bleeding need not be feared, but if profuse, it is detrimental. The sooner the work is done in the month the better. The Isabella, Bland, Catawba, and other American varieties, are of such rampant growth, that when only a few years old, they bear most abundantly, and hence the inexperienced cultivator concludes that pruning is not necessary, and that they do better without it. A most erroneous conclusion—for the vines by such neglect soon become a mass of thickly matted stems and branches, their vigor is exhausted, and diminutive crops of poor fruit is the result. But by good pruning they may be kept in perennial vigor and undiminished productiveness.

The great leading rule to follow, is to keep the old wood down as near the ground as possible, and to let new and vigorous shoots, spring up, from the bearing branches, which must be thinly and evenly distributed over the trellis. If these requisites are strictly attended to, heavy crops of fine fruit will many times repay the attention given, whatever be the particular mode adopted; although the method of training horizontal arms, to sustain upright and parallel bearing shoots, is the most systematic and convenient, as represented in the annexed figure. Two different ways of management for this method have been practiced. The first is to allow the old horizontal arms to remain, but to cut down to one good bud; every year, every alternate upright branch, that a new one may spring up in its place, thus renewing these uprights every year. The second is to let the uprights remain several years, only pruning-in yearly their laterals, to a single bud each. An acquaintance, who is wonderfully successful with the Isabella grape, successively buries in the earth the old portion of the vine, so that young and vigorous stems are at all times only visible; and by careful and clean pruning, he raises enormous crops—some of the bunches of Isabella grapes being eight inches long, and in one instance a single branch of one year's growth, bore the following season eighty pounds of fruit.

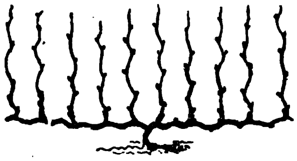


Fig. 25.

Grafting.—Grafts should be cut early in the month. No pains should be spared to procure them from the best sources—the difference between a good and bad scion for a single tree, may make a vast difference in the value of the crop in future years. Grafting is a simple operation; and every careful farmer, or his son, may do the work for himself, and more satisfactorily than to employ others. The grafting wax may be prepared in different ways. The cheapest composition is made of one part, by weight, of beeswax, two of tallow, and four of rosin. More beeswax and less rosin adds to its cost, but renders it less adhesive to the hands. Three parts of rosin, three of beeswax, and two of tallow, constitute an excellent grafting wax. It is applied by spreading it, while just melted, with a brush over a thin newspaper, which is cut up with a knife when quite cold, in plasters of convenient size; or it is spread on cheap calico or muslin; or it is worked with wet hands till it may be drawn out in strings or ribbons, when it is alone wound round the grafted part; or it is applied alone, while just melted, to the part, by a small brush. Either mode of using is good, provided that the wax when used is warm enough to bear pressure, and cause adhesion closely on every part, and leave no vacant cavities. In cold weather a lantern or chafing-dish will be needed for this purpose.

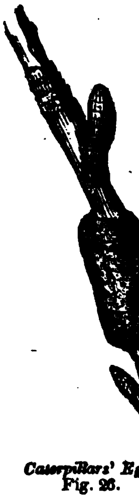
The operator may suit himself as to the peculiar mode of grafting. But it is very essential to have sharp tools; to have the parts in close contact by pressure; that the outer edges of the wood (and not the outside of the bark) in the stock and graft, may exactly coincide at one point at least; and that all cut parts be excluded from wet and air by wax well applied. Cherry and plum trees should be grafted very early; apples and pears, later.

To prevent confusion in names, only one variety should, if possible, be set in each tree, and the name and number in the row be immediately registered in a book for future reference. No one should think of trusting to memory for the name of a single sort.

Budded Trees.—Trees in which buds were inserted last summer, should now be headed down to the bud, that it may grow freely by receiving all the sap. To cause the new shoot to grow straight, leave two or three inches of the stock above the bud; to this the new shoot is to be closely tied as soon as it is a few inches long, and so remain till mid-summer, when the stump is to be pared down closely to the bud.

Fruit Trees which lack vigor of growth, should be stimulated with a good coating of old manure, spaded in as soon as the frost leaves the ground. All fruit trees, except of the largest size, which do not stand in ground kept constantly cultivated by the hoe, should have a circle, *several feet* in diameter, spaded around them. Soap-suds, especially for peach trees, is fine. All trees are benefitted by it.

Orchard Caterpillars.—Take them early, and their destruction is easy; let them flourish for awhile, and it is exceedingly difficult. Their eggs are now found in nests or rings of several hundred each, near the extremities of the young shoots, and at a few feet distance appear like small knobs on the branches. They are now quickly clipped off and burned; every one thus removed preventing a large nest of voracious caterpillars. As soon as the buds begin to open, they hatch, and remaining for a few days in their small nests, give them a conspicuous downy appearance; when the remainder, if any should chance to have been left, should be speedily removed and destroyed, as they will soon increase rapidly in size and mischief.


Caterpillars' Eggs.
Fig. 26.

Preparing for Transplanting—Those intending to transplant fruit trees, should have the ground well prepared in season, by digging ample holes, and preparing the soil in the best manner. Let the holes be six or seven feet across, and all the outer portions, or those not to be in immediate contact with the roots, filled beforehand, if convenient, with a mixture of old rotted manure with soil. This will give the young trees a vigorous start until they come into bearing; and in the meantime the ground should be gradually enriched around them by manuring the crops. It would be still better, if the ground for the young orchard could be for two years previously well prepared for trees, as follows:—First, run the subsoil plow as deeply as possible, to loosen the soil for the entrance of the common plow for trench-plowing, the latter operation for the purpose of working manure deeply below the surface, and for intermixing thoroughly the surface soil, subsoil and manure. Two years of such cultivation, with carrots and other roots, will bring land to the finest order, and even one year would be eminently useful.

Cultivation of the Apple.

Having been practically acquainted with the Apple tree for more than thirty years, and being anxious to see this tree more successfully cultivated, I am constrained to give publicity to my observations, experience, and mode of culture, hoping that some may be instructed, and the attention of others awakened to this interesting subject.

The apple tree is the most valuable fruit tree that grows in this part of the world—is naturally very long lived, very productive, and easily cultivated, requiring but little more attention every year than a hill of corn; and yet, strange as it is, there are not half enough good apples produced for family use.

Trees may be procured of the nurserymen, or be raised on your own premises. If the latter course is taken, procure as many seeds as you want from the kind of apples you wish to produce. They will not all of them produce the same kinds—a few will be the same or similar, and others new varieties—nearly all will be very good, if the seeds were of good kinds. Plant your seeds as soon in the spring as the frost is out, in good mellow ground, about a quarter of an inch deep, in rows about two feet apart, and about six inches apart in the rows. Keep the ground mellow and clean, and in about three years they will do to set in their abiding place, or to graft.

Trees of natural growth generally last the longest. In the selections of the kinds you prefer to graft, do not disregard those that are uniformly good bearers, and prefer grafts from young healthy trees. Cut the last year's growth with an inch or so of the year before, if you wish to keep them awhile. If you cut at all from an old tree, take a last year's sprout, well matured. The nearer the time of running of the sap the better, but if most convenient, they may be cut and kept in a moist place some weeks. As soon as the sap runs, remove the soil from around the tree about an inch deep, insert your graft smoothly, and bring the soil around it about an inch above the insertion. In about two years your trees will do to set in their abiding place.

In selecting a place for an orchard, prefer upland or hill-sides. The fruit will be richer, higher flavored, and more abundant, than on low, flat lands. Almost all kinds of soil will do, if they are deep, rich, and well cultivated. In this vicinity, the soil called *iron-stone* is lately the most productive.. It is believed by some that an eastern exposure is liable to blast; but I have not found it so.

Dig the holes for your trees a little larger than the extension of the roots, and about eight or ten inches deep.. Take up your trees carefully, without breaking the roots, and the sooner they are set in their places the better. Set them just about as deep as they were in the nursery, filling the holes with just what was taken out and nothing else. Many trees are greatly injured by being set too deep. Set a stake about a foot from the tree, leaning to it, of equal height, and tie the tree loosely to the stake. Plow or dig the soil mellow, around the tree, two or three feet from it at least, in the spring of every year, to the depth of three or four inches, but not to injure the roots.

In cultivating your orchard, a good arrangement, is to plow one or two years, and leave the ground one or two years in clover—keeping the soil rich with manure. This mode is much better than to put heaps around the tree, and bury the roots too deep. Just before the sap runs, every spring, prune, but in doing this, be careful not to prune too much. I have seen a great many orchards nearly ruined by pruning too much. The supposition that more sap and nutriment is obtained by the remaining branches when some are removed, is a mistake. The branches constitute a part of the tree, and do their office in furnishing nourishment just as much as the roots. The lower limbs of the top should be about four and a half feet from the ground; and here let a full and natural top be commenced. I have never known a very large tree, nor a good bearing tree, among those that had high tops, either by cutting off the lower branches, or by trimming them up high.

A great many apples are lost by leaving them too long on the trees. Winter apples, as soon as the seeds are ripe, should be picked, and taken to a cool, dry, shady place, spread thin, and lay without cover, until there is danger of freezing. When there is danger of this, remove them to their winter quarters, which should also be cool, just so as to avoid freezing. Put them on shelves, not more than two or three courses thick, and if put in a cellar, the shelves should be at least three feet high from the bottom. Leave them uncovered, and remove the decayed ones, as occasion requires, and in all that you do, be careful not to bruise them in the least. I have kept Newtown Pippins in this way until August. R. K. TUTTLE. *Morristown, N. J., February 4th*, 1848.

Productiveness of Strawberries.

In all the long discussions about barren and fertile strawberries, the actual amount which each variety will yield per acre, which is of great importance, appears to be entirely forgotten. To one who raises for market, it is quite essential to select such a variety as will yield a surplus of a hundred per cent. above the cost of raising, rather than one that will yield no such surplus at all; and the home cultivator wishes to get as much from his labor and land as practicable. Only a few statements of the amount per acre have ever been made. Hovey's Seedling, it is said, has yielded 2,000 quarts, or more that 62 bushels per acre. The Old Hudson, (of Cincinnati,) which is probably the most productive of all strawberries as yet much cultivated, has produced, according to Nicholas Longworth, at the rate of 5,000 quarts, or 156 bushels per acre. Burr's Late Prolific, a new variety lately originated at Columbus, Ohio, it is stated yielded 35 quarts on a bed 6 feet by 20, which is about 240 bushels per acre; it doubtless received the best possible culture. It would be very interesting and of great value, to know the comparative productiveness of such varieties as Hovey's Seedling, Large Early Scarlet, Ross' Phœnix, Swainstones' Seedling, Black Prince, and others, raised side by side, and treated precisely alike. Such experiments would greatly facilitate the selection of the best sorts, for each different part of the country.

MOSS ON FRUIT TREES, may be removed by soap-suds, thin whitewash, or a mixture of cow-dung, urine and soap-suds.

Grafting the Tree-Pæonia.

Loudon, in his Surburban Horticulturist, describes a mode of grafting the fine varieties of the Tree Pæonia on the roots of the common herbaceous varieties. According to his method, the work is done at midsummer, and the grafted roots inserted in a bed of tan, to be taken up and potted after they have thrown out roots by mid-autumn, and placed in a cold frame to remain through winter.

The writer has been successful by performing the work early in the spring, before the buds of the graft have started. In the annexed figure, *a* exhibits a portion of the root of the common double crimson pæonia, not split, as in common cleft grafting, but with a long acute notch cut out of the tuber with a sharp knife. The graft is cut so as to fit this notch exactly as represented at *b*. It is then secured by bass and covered with wax, and placed in fine rich mellow earth, even with the upper bud of the graft. The Tree Pæonia, as is well known, is of very slow increase, and is usually sold at a dollar or two a plant. The roots or tubers of several of the herbaceous varieties may be had in abundance. In the experiments already performed, most of them have grown and done well; but the work must be done as early in the season as practicable, and before the buds have swollen, which usually takes place very early in the Tree Pæonia.

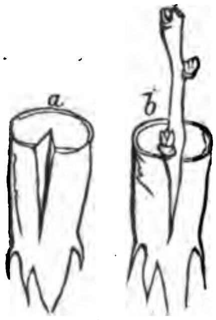


Fig. 26.

Fire Blight—the Columbia Pear.

The remarks on these two subjects, under the Horticultural head last month, not having been seen by the editor of this department till after publication, he wishes to remark, in addition to what is there stated relative to the pear blight—that he is fully confirmed from past observation, that the *immediate* cause of this disaster is in some seasons chiefly the *hot rays of the sun*. It is however not at all improbable, that there may be a predisposing cause independent of this, but this latter must remain for the present somewhat involved in conjecture. Some notice of the observations leading to the belief in the destructive influence of solar heat, were published in the first number of the current volume.

It may be proper, in connexion with this subject, to point out a single error in the remarks of a highly intelligent correspondent of the Horticulturist, where he attributes *scalding of the sap* to the concentration of the sun's rays, "by the shower drops of water suspended in the tree, *forming so many lenses*." Now, the diameter of a water drop is scarcely the tenth of an inch; its focal point is only about one half its diameter from the drop, or the twentieth of an inch. It is hardly admissible to suppose that these drops hanging in the tree, should be situated just the twentieth of an inch from the trunk. If the distance were only the twentieth of an inch more, the rays instead of being brought to a focus, would be widely dissipated. Again, in a lens of so short a focal length, the diameter of the focal point would be less than one thousandth part of an inch—so exceedingly small as not to possess any effective power in heating even the epidermis.

The *Columbia Pear* has borne for several years in Western New-York, and the quality of the fruit has corresponded precisely with that of specimens received from Massachusetts. It is a vigorous, productive and very handsome pear—there is scarcely a variety that will compare with it in handsome, rounded, symmetrical form. This, with its large size, must have given it chiefly its high fame, for we have never been able to place it higher for quality than second rate. It is to be presumed that the high commendations bestowed upon it in the "Fruits and Fruit Trees," must refer to specimens ripened farther south or in the neighborhood of New-York city.

Abstract of Remarks on Various Pears,

DESCRIBED IN THE FIRST VOL. OF THE HORTICULTURIST.

The following abstract of remarks, in the first vol. of the Horticulturist, on various pears, was made out originally for my own information and convenience. Thinking it might be quite as useful to many others as to myself, I concluded to send it to you for publication. It embraces the substance of all that has been said on most pears of note, by the experienced gardening and pomological contributors of that valuable journal, during one year.

Opinions relative to the same variety of fruit, vary essentially in different sections of the country, and even in the same neighborhood. By placing these different opinions, as far as they have been elicited, side by side, the inquirer by comparing them, can more easily arrive at its true merits. With the name of each writer, wherever it first appears, I have given his place of residence. The pears are arranged in alphabetical order. The figures in brackets refer to the page of the Horticulturist. At the conclusion of the remarks on each pear, I have added its time of ripening, from Downing's "Fruits and Fruit Trees."

Andrews—This pear Cheever Newhall of Dorchester, Mass. (415) considers a fruit of the very first merit. J. J. Thomas of Macedon, N. Y. (480) says it is a fine pear—a great and early bearer—fruit handsome; but only second rate in richness, and drops from the tree usually before it is sufficiently matured to ripen well in the house. Early in Sept.

Bartlett—Mr. Downing says of this pear (13)—"The Bartlett pear from its unusual productiveness, size, excellence and beauty, as an early fruit, added to its vigor as a tree, and the rapidity with which it comes in to bearing, has actually been the object of a sort of mania among those largely engaged in pear planting, within the last three years." Col. Wilder, Mr. Johnson and Mr. Ives, (278) all near Boston, coincide in declaring this to be "all in all," "*the best* summer pear." Downing in speaking of it again (279) says: "The Bartlett is almost a universal favorite. This is owing not simply to its size and good quality, but also to its regular productiveness, joined to its invaluable habit of adapting itself to every soil, and bearing while the tree is yet very young." Last of August, and September.

Belle de Brussels—This is a fine, early, French pear, but recently introduced into this country. P. Barry, of Rochester, N. Y., (446) thinks it unsurpassed by any summer pear of native or foreign origin that he has yet seen. "The tree," he says, "is vigorous, its growth is compact and straight; it is prolific to a fault." Fruit large. Middle of August.

Beurre Bosc—Downing says of this (13)—"Among autumn pears, the Beurre Bosc proves, year after year, equally deserving of praise. Its branches are regularly laden with large fair and beautiful specimens, which ripen gradually, and always attain a delicious flavor. With many sorts of pears, it is unfortunately the case that only one fruit in ten is a really fine specimen. With the Beurré Bosc, it is just the reverse; scarcely one in ten is blemished in appearance, or defective in flavor. It is, in short, a standard fruit of the highest excellence, worthy of universal cultivation." Robt. Manning of Salem, Mass. (279) considers it, taking every thing into consideration, the best fall pear. October.

Beurre d'Aremberg—Downing remarks (13) that—"This is now unanimously acknowledged by our best cultivators, to be the *first of winter pears* for this climate. The tree, hardy, uniformly productive, and holding its fruit well; the fruit itself high flavored, maturing perfectly in all situations, and always keeping and ripening admirably." Col. Wilder (19) says—"as a constant, prolific, hardy sort, the d'Aremberg is unsurpassed, and whether on pear or quince stock proves admirably adapted to this climate. It is a fruit easily excited to maturity, and may be brought into eating even in November, or retarded until March." Col. Wilder, Mr. Walker, and Mr. Johnson, near Boston, and Mr. Downing, (278) concur in naming this as the most valuable winter Pear. December to January.

Beurre Diel—Cheever Newhall (415) recommends the Beurré Diel for strong rich soils. September to December.

Beurre Easter—M. P. Wilder writes (22)—'this variety has generally proved so variable and uncertain that it cannot, from our experience at present, be relied upon. It, however, succeeds better on the quince." Cheever Newhall (416) considers it a pear of first quality when well ripened, and will keep with care until May, but is, with me a shy bearer, and often does not come to maturity." J. J. Thomas raises a similar objection (480)—"the fruit rarely attaining perfection under ordinary management." January to April.

Bloodgood—J. C. Lee, of Salem, Mass. considers this the best early pear. (279) Cheever Newhall (415) says of it—"This pear may be good in some soils, but I have never succeeded in raising one that could be classed first quality." Downing says (415)—"this is uniformly the very best early pear here." (Newbury.) J. J. Thomas writes (480)—"The Bloodgood proves to be a decidedly first-rate pear; no one preceding or ripening with it, proving its equal in all respects." Beginning of August.

Catilac—Cheever Newhall (415) considers this, the best winter *cooking* pear. "It is very large, stews very tender, and is then of rich color and superior flavor." November to March.

Columbia—M. P. Wilder says—(20) "This excellent native variety has proved with me a fruit more uniformly smooth, perfect shape, and free from the depredations of insects, than almost any other sort. The tree is thrifty and hardy, not prolific when young, but a great bearer on mature subjects, the fruit being regularly distributed over the branches, and of a very uniform size." J. J. Thomas (480) says—"The Columbia bears very fine crops of large fair fruit, but drops too early from the tree." November to January.

Cushing—The only remarks in relation to this pear, are by Cheever Newhall (416) who says—"The Cushing, a native, is a good fruit, but ripens with the Bartlett and is inferior to it."

Dearborn's Seedling—Downing says of this variety (13)—"It is not a large pear, but it is one of most excellent flavor, and bears such regular and abundant crops, that its moderate size is amply compensated for by its abundant quantity. It is always best when ripened in the house, and bears transportation to market well." J. J. Thomas writes, (480) "Dearborn's Seedling is one of the best—nearly equal to the Bloodgood, but smaller." Mid. of August.

Dix—Cheever Newhall (415) remarks—"The Dix pear sometimes, in this neighborhood, cracks in exhausted soils, but is a noble and delicious fruit, not surpassed in my estimation by any other pear known. October and November.

Doyenne Gray—J. J. Thomas is the only writer in first vol. of the Horticulturist who refers to this pear. He says (480)—"were I compelled to choose but one variety, as best, for its delicious flavor, I should perhaps select the Gray Doyenné." Mid. October.

Doyenne White, *or Virgalieu*—Wm. C. W., Baltimore writes, (144)—"The white Doyenne pear which some have said is an outcast, flourishes on my father's estate as with you, in all its original vigor. * * * On the 4th October 1844, dining at Rouen, (France) I found at the depot the handsomest specimens of the White Doyenné I ever saw, looking and tasting as though they had been grown on trees as healthy and vigorous as the Seckel." The same writer says again, (197) that in November in Paris, "the pear preferred above all others was the White Doyenné far excelling some dozen varieties then in season, both in beauty and quality," Downing (279) recommends this as the best *fall* pear for all gardens north and west of Newburgh. Cheever Newhall (416) says—"With me it succeeds well when engrafted on quince stocks, but is worthless on pear stocks." J. J. Thomas remarks (480) that it maintains with him the high character given of it elsewhere. September to December.

[We are obliged to defer the remainder of this Descriptive List of Pears, from our correspondent, F. J. Scott, Esq., Toledo, till our next.—Eds.]

Budding in the Spring.

In the spring of 1845, I cleft grafted an apple stock that was about two inches in diameter. The grafts grew well until the summer of 1846, when they were blown off by the wind, in place of which quite a number of sprouts came out. On the 11th of May, 1847, I inserted four buds in the usual manner, taken from scions cut early for grafting, with the most perfect success. The largest of which is now three and a half feet long, and an inch and a half in circumference at the base. Alfred Young. *Gustavus, O., Jan.* 14, '48.

Blight in Pear Trees.

A valuable tree of Fall Butter pears was much affected in 1846. A part of the bark was removed in the 6th month, care being taken to avoid bruising the ligneous formation. The tree revived, and in 1847 appears more thrifty. A younger tree also showed the affection. The bark was removed entirely from the body. The disease has disappeared, and the tree is thrifty, and is now heavily laden with large grown fruit. I do not say it was affected by "hiding" the trees, but do not know what else to attribute it to; and have seen cases in apple trees where it materially helped them. R. H. *Richmond, Ind.*, 10 *mo*, 1847.

The Paulownia.

This new and famous shade tree, as is well known, is remarkable for the large size of its dark green leaves. A young tree, in moderately rich soil, on the grounds of the writer in Macedon, bore one leaf measuring over 25 inches wide, and about as long, and several others nearly as large. The soil was *well cultivated*. On other land as rich, but little cultivated, within the same enclosure, the leaves were scarcely six inches in diameter.

Correction.—In the description of the Primordian plum, last number, for "marked" read *necked*,—the fruit possesing a slight neck like a pear. Page 53, 1st col., for "Fortunes," read *Fortunes*.

Balsams.—A correspondent of the Gardener's Chronicle states that seed three or four years old, saved from double varieties, is pretty sure to give double flowers; whereas one year old seed is almost certain to produce single blossoms.

MEMOIR OF ELKANAH WATSON.

Elkanah Watson, always a private citizen, occupied for many years a prominent position in sociey. A life, protracted far beyond the ordinary term allotted to man, embracing the thrilling period of the Revolution, and intimately associated with many prominent actors in its scenes, in both hemispheres; occupied in the agitation of varied subjects of public improvement and popular interest, and in the discussion and controversies incident to them, must necessarily be fraught with incident and topics which cannot adequately be exhibited in our limited columns. We can scarcely present more than a naked synopsis of some of the prominent events of a peculiarly active and variegated career, with a little detail of the eminent services of Mr. Watson in the promotion of agricultural improvements. Mr. Watson was born in Plymouth, Mass. He traced his lineage to the pilgrims of the Mayflower, being descended from the first marriage, as is supposed, solemnized in New England. The qualities of his puritan ancestors, enterprize, an active and inquiring mind, and an ardent love of liberty, were strongly impressed upon his character. In accordance with the usages of those days, he was withdrawn at an early age from school, and placed with John Brown, of Providence, then among the wealthiest and most eminent merchants of the Colonies. The agitating scenes of the revolution aroused all the sympathies of Mr. Watson, who was repeatedly under arms during the contest. His memoirs contain a glowing and graphic account of probably the first cruise of a colonial vessel, in avowed opposition to the flag of England, in which he was engaged with a design to intercept and rescue Mr. Brown, a prisoner under arrest by the government, in his passage from Providence to Boston. In the service of Mr. Brown, and intrusted with a large amount of funds, he travelled in 1777, on horseback, from Boston to Georgia. Passing almost along the line of the military operations of the war, his journals exhibit a most exciting picture of the spirit and incidents of the times. On his return from the south, Mr. Watson sailed for France in a packet, bearing despatches to Dr. Franklin at Paris. With much difficulty and hazard they evaded the British cruisers, and safely reached La Rochelle. He remained several years in France, residing principally in the city of Nantes and at Paris. In the intervals of his business avocations, he travelled extensively in France, Flanders, and Germany, and always, as his journals evince, with an eye of careful and attentive observation. He ever afterwards cherished the most kind recollections of France, and the warmest sympathy in all her interests. While in Paris he enjoyed a familiar intercourse with Dr. Franklin, and in common with all who approached the illustrious patriot and philosopher, was fascinated and delighted by the wisdom of his tongue, and the benignity of his heart. During his residence in France, Mr. Watson became acquainted with John Adams. A close and uninterrupted intimacy of more than half a century subsisted between them, cemented by a frequent intercourse of a confidential correspondence. The letters of Mr. Adams are of a highly interesting character, and portray the sagacity of his mind, and the lofty devotion and fervor of his patriotism. Mr. Watson proceeded in 1782, to London, as bearer of despatches from Dr. Franklin. In that capacity, and by the influence of letters from Franklin, he was brought into personal association, not only with Burke and others of that galaxy, which then shone in the British Parliament, but also with Priestley, Price, and other distinguished philosophers of England.

Moving in a sphere so elevated and so intellectual, Mr. Watson enjoyed the most favorable opportunity of observing the institutions, the men, and the affairs of the Old World. His habit of viewing society was thus enlarged, and his mind expanded and improved. He traversed various sections of England and Wales, and although yielding to the strong and bitter feelings of hostility fitting an American patriot at that epoch, against the government, he seems to have been amazed and delighted in witnessing the progress of England in the arts of peace. He also made a hasty tour through Holland, which was the basis of a future publication. The canals and internal improvements of these countries, their beauty and vast agricultural resources, appeared particularly to have attracted his attention. He carefully examined their public works, and from the mere curiosity of an observing traveller, procured data of expenses, plans, &c., which, at a subsequent period, he applied to the most important practical purposes. The rural beauties that every where charmed his eye, first probably excited an interest and desire for agricultural pursuits; whilst the high degree of improved culture, and the successful application of science, he saw, strongly contrasted with the primitive system, or want of system, to which he was accustomed in America. His observations on these subjects created an enduring conviction of the importance and necessity of these improvements to his own country, and aroused an enthusiasm for their promotion, that glowed to the latest period of his life.

Seed thus fortuitously sown in Europe had, after the lapse of many years, their fruition in America, in the efficient and untiring zeal with which he devoted himself to the advancement of numerous schemes of local and public improvement, and the great interests of agriculture. Mr. Watson had the peculiar, and to a high toned and ardent American, the grateful privilege, of hearing from the lips of the king of Great Britain, before the Imperial Parliament, the recognition of our national existence. He always alluded to that event as the proudest hour in his life. In 1784, he returned to America, with an increased attachment for the manners, customs, and institutions of his native land. Soon after his return Mr. Watson again proceeded to the Southern States, and resided for some years in North Carolina. On his tour southward he visited Mt. Vernon, and we deeply regret we cannot extract from his journal an incident, that exhibits a beautiful trait in the lovely and harmonious character of Washington. The journals of Mr. Watson during his southern residence, afford an interesting portraiture of the manners and customs at that period of society at the south. In the practice, from early youth, of recording the events of his own life, and the incidents around him, with the opinions and feelings excited by them, he has left MSS. which range over a period of more than half a century, and are a rich source of valuable and curious information.

In 1788, he became a citizen of Albany, and at a very early day began the agitation in that city, of various subjects of local improvement. Among other schemes which engaged his attention for a series of years, and which he sustained through the press and by personal efforts, we may enumerate the paving of the streets—a supply of water—a public library—the introduction of lamps—the organization of the Bank of Albany—a turnpike between Schenectady and Albany. In the same year, Mr. Watson travelled along the valley of of the Mohawk to Fort Stanwix, at that time on the very confines of civilization. The policy of a union of the waters of Lake Ontario and the Mohawk, and the improvement of their navigation, seemed to have suggested itself to his mind, with a deep impression of its importance and facility. His views on this subject were matured and strengthened by subsequent observations made in a tour through the same region three years afterwards. The result of these convictions was earnest and continued appeals to the public and the legislature, urging the adoption of a specific system of internal improvement. "Who initiated the canal policy of the State," it is not our province to discuss; but we may assert, that the efforts and suggestions of Mr. Watson, were peculiarly efficient in originating the canal law of 1792. He was a director, and among the most prominent and active agents of the company formed under that law.

A society was organized in 1792, through his exertions in Albany, offering rewards to promote the manufacture of maple sugar, and an attempt was also made to procure, from the legislature, an act for the same object. The fact, trifling in itself, is interesting, as it presaged the future labors of Mr. Watson for the advancement of agricultural interests. Soon after, he drafted and circulated a petition to the legislature, and was primarily instrumental in providing a law establishing in New-York a state prison, upon the hard labor system.

In 1807, Mr. Watson purchased a beautiful seat, with an extensive farming establishment attached, situated in Pittsfield, Mass. To this place, in one of the most picturesque and delightful regions in New England, he retired, in pursuit of those rural scenes and enjoyments which for twenty years had been his warmest aspiration. The county of Berkshire, always distinguished for the beauty of its scenery, was not then one of the garden spots of New England. Its farms were not fertile, were generally cultivated with little care or science, and the stock were of an inferior quality. This was the scene of Mr. Watson's agricultural labors, and the great field of his usefulness. The Agricultural Society of that county, which was mainly founded by his unwearied efforts, is an enduring monument of his devoted patriotism and fervent zeal. Although practically ignorant of all agricultural pursuits, he enlisted in his new vocation with all the ardor and engagedness that marked his character. The coarse wool sheep and primitive swine first attracted his attention, and his inititory measure in his career of improvement, was the introduction of a pair of fine grade Merino sheep, from the flock of Chancellor Livingston. These were soon succeeded by two grass feed swine from the same vicinity. The merit may be ascribed to him of having, within the first year of his residence in Berkshire, by the introduction of these animals, laid the basis of that branch of agricultural interest, which has proved one great element of the wealth and prosperity of that county. These sheep were the first Merinos that had been seen in the region, and their appearance excited much curiosity and discussion. To gratify the one and arouse the other, Mr. Watson, in pursuance of notice, exhibited them on the public square in Pittsfield, for general inspection. The occasion assembled a considerable number of farmers and others, who were surprised and delighted with the animals, and with the quality and texture of their wool. This novel and humble exhibition he states, created universal interest, and suggested to his mind those cattle shows which were soon established in the county. The wool from these sheep he caused to be manufactured into cloth, by the most skillful artists the country then contained. The work far excelled any previously produced, and probably was the inception of those woolen manufactures that now compete with the choicest fabrics of Europe. The incident was announced by the press throughout the country, with a detail of the expense of manufacture, the quality, &c., of the cloth, and samples of it even, were exhibited in our chief cities. We may here add, that just previous to the war of 1812, Mr. Watson selected sufficient of his finest wool for two coat patterns, and had it manufactured in the most perfect style our improved artisans could give it. One he sent as a tribute of patriotism to Mr. Madison, and the other he transmitted, as an evidence of our triumphant progress in the arts, to the Prince Regent of England. At an early day Mr. Watson introduced the subject of an Agricultural Society, and personally, as well as by constant discussions in the newspapers, pressed its formation. His exertions in the outset, with the mass of the community, met with little favor or consideration. The practical farmers, with few exceptions, derided his schemes, and turned a deaf ear to his solicitations, as the mere dreams of visionary speculation. Unyielding zeal, the sagacity of some, and the intelligence of the mass, ultimately triumphed. Many who were the most violent in their derisions and opposition to his project, lived to feel their error, and to give to the society their most hearty and vigorous support. In 1810, a feeble and sickly manifestation was made in an attempt at an organization. This, however, the next year expanded into an exhibition, affording the highest interest and gratification. Mr. Watson, on the first anniversary of the society, delivered an address before a crowded and interested audience. A feeling was aroused that has never since that day slumbered. The success of the effort was no longer a problem. The progress of the society has continually been onward, expanding in influence and usefulness. Its anniversaries have become festival days of the county. Its form and plan have been made the model throughout the Union, wherever similar institutions have been organized. Its vast and most beneficial effect upon the agricultural condition of that county, none can hesitate to admit.

In 1816, Mr. Watson abandoned his rural pursuits, his flocks and herds, and returned to his former residence in Albany. He soon became involved in the agricultural movements in this State. The following year he aided in the formation of a society after the Berkshire model, in Otsego county, and for several successive years was constantly and vigorously engaged in the organization of similar societies in this and the adjacent States. He struggled during this period with unremitted efforts, to induce the legislature to extend to them, and kindred interests, the fostering hand of government patronage. At an earlier period a National Board of Agriculture, had been with Mr. Watson a cherished project. He was the author of an elaborate report, presented by the Committee on Agriculture of the New-York Assembly, in vindication of this policy, which attracted much attention and was generally diffused. Although without pretension to scientific attainments, the opinions and suggestions of Mr. Watson were continually solicited from various sections of New-York, and the adjoining States, in reference to numerous questions of internal improvements.

Our space will not premit us to present any detail of the system or theory of the Berkshire Society, and can only refer to Mr. Watson's history of that society, published in 1820, for a full exposition of its plan and operations. Other associations for agricultural improvement had no doubt previously existed; but we believe it is conceded, that the model and general features of the Berkshire system were peculiar and original.

The addresses delivered by him before various agricultural societies were of deep interest, and fraught with judicious scientific and practical suggestions. During the last residence of Mr. Watson in Albany, he opened an extensive correspondence with our foreign public functionaries, for the purpose of procuring, by enlisting their services and zeal, new and useful varieties of vegetables and grain. He thus became the medium by which the seeds of many important and valuable agricultural productions were introduced into the country. The staple grains of some sections of this state, still successfully cultivated, may be traced to these efforts.

Mr. W. was an ardent and efficient promoter of popular education. The interests of colleges, academies, and common schools, continually engaged the services of his pen, and his individual exertions. He was an early and active advocate of the cause and privileges of Union College. The Lombardy poplars, that formed the academic grove which enveloped the old college edifice, were transmitted personally by him from Albany, and many of them planted by his own hand.

His mind and eye were ever intent on subjects of public improvement, and prompt and vigilant in their development. Whilst a sojourner at Poughkeepsie for a few months, he devoted himself to arouse the public mind to the consideration of various questions of general and local interest. The project of a turnpike road from New-York to Albany at that time occupied his attention, and was urged with his usual ardor and determination. Passing through Buffalo, on a journey to Detroit in 1818, he saw the extreme necessity of more extended commercial facilities at that place; and on the impulse of the moment devised a plan for a harbor which he submitted to the proper authorities. The plan subsequently adopted was almost identical with that he suggested; whether his was the original conception, we cannot assert.

Although fervent and enthusiastic in his patriotism, a warm admirer of our political institutions, and a firm believer in their perpetuity, Mr. Watson rarely engaged in the mere party politics of the hour. His essays and speculations on political subjects were numerous and diversified, exhibiting no ordinary sagacity and observation. In 1782, whilst at London, he earnestly and with great boldness, in the avowed character of an American citizen, advocated in the public press of that city, the rights of the colonies to their independence, and urged the policy of its recognition upon the government.

He again removed from Albany in 1827, and resided the remainder of his life at Port Kent, a village upon Lake Champlain of his own creation, and the principal avenue to the immense manufacturing region embraced within the valley of the Ausable. Here a new field was presented for his patriotic labors, and although verging upon three score and ten, Mr. Watson entered upon it with renovated vigor. We will only indicate, as an evidence of his active usefulness, the law for a public state road from Port Kent to Hopkinton; a railroad from Lake Champlain to the St. Lawrence, and another from Champlain to Boston. Each of these was either the original conception of his own mind, or was powerfully promoted by his agency. The powers of his mind were unimpaired, and his intellectual industry unabated, to the last days of his life. His thoughts were occupied on these subjects even amid the last throes of nature. Just before his decease, and when unconscious of all external objects, he inquired for one who then stood over his bed, and added, "ah, yes, I know, he is gone to ——, after that railroad bill," and then, in the delirium of approaching death, he exclaimed with the strongest emphasis, and earnest gesticulation, "yonder is the track for the road, and at this point it must terminate." "The ruling passion strong in death," was still animating and lightening his mind.

Few citizens have exhibited through a long career more ardor and devotedness for the promotion of the best interests of their country. The fact that his devotion to public concerns impaired the private fortune of Mr. Watson, attests the purity and disinterestedness of his motives. Some of the projects which he conceived were doubtless visionary and extravagant, while others, which found little favor in popular sentiment, in their inception, proved by their results, the sagacity and prescience of his theories. Impatient at the listless and calculating spirit of doubt or scepticism that often crossed his path, he sometimes opposed it with an impetuous zeal rather than conciliatory moderation, and thus animated hostility when he might have diverted opposition. Mr. Watson's essays and other publications were very voluminous, and spread over a period of more than sixty years. He wrote with great fluency, and in a nervous and elevated style, wanting often, however, the polish and precision formed by the hand of finished education. He was not learned in science or literature; men and nature were the books he studied, and from travel and observation he had accumulated no ordinary fund of facts and intelligence. Mr. Watson died at Port Kent, December 5, 1842, in his 85th year. A plain monument is erected over his grave, inscribed with this simple and touching epitaph, written by himself:

HERE LIES THE REMAINS OF
ELKANAH WATSON,
The Founder and First President of the Berkshire Agricultural Society. May generations yet unborn learn by his example to love their country.

THE FARMER'S NOTE BOOK.

Benefits of Reading Agricultural Papers.

Since I last saw you in Albany, I have occupied some of my leisure moments in looking over the volumes of the Cultivator from its commencement. I have been induced to do so from curiosity to determine, from examination, whether the paper has generally had a *practical* character, or has been (as some carping persons say it has) a receptacle for wild, impracticable theories, or for puffs of speculator's humbugs in cattle, sheep, hogs, potatoes, corn, &c., &c. While I find much matter pertaining to husbandry which cannot be of practical value to me, or to other farmers in this immediate vicinity, I have been agreeably disappointed in finding so much knowledge communicated in its pages which I can immediately apply, and with immediate benefit. Much instruction contained in the early volumes of the Cultivator had passed from my memory—been forgotten with the volumes of the paper, when filed away, unbound and undisturbed. I mention this fact as a strong argument to other subscribers in favor of procuring the bound volumes, as I have done. Many farmers of sound judgment, and who are well informed on other subjects, refuse to subscribe for the Cultivator, assigning as a reason that it is the mere organ of a wealthy band of speculators in bulls and boars, and filled with laudatory notices of farming—such as rich, amateur farmers alone can follow. If such opponents of the Cultivator, and of kindred agricultural journals, would sit down, and carefully examine the matter contained in the published volumes, they would (many of them at least) become friends and patrons of the paper.

While leisurely turning over the pages of the Cultivator, and noticing their contents, I have frequently been reminded of remarks made to me, during the exciting political campaign of 1840, by a gentleman—an eminent lawyer, among whose papers I found the numbers of the Cultivator. Upon expressing my astonishment at finding *him* the reader of an agricultural paper, when he was not the proprietor even of a garden, he answered me—"I am not a farmer, and never expect to be. I was bred and have lived a lawyer, and shall continue letting myself out to be kicked in other men's quarrels; but the Cultivator is pleasant reading to me, and I turn from the details of my profession, and the sharp warfare of party, to the pages of that paper, as school boys turn from their dog-eared Virgils to the pages of glowing romance."

That a large portion of the earlier volumes of the Cultivator was devoted to the mode of farming best suited to the sandy plains about Albany, I know; but I also believe that a large space in its columns has effected much towards making "the desert rejoice, and blossom like the rose." I am fully of the opinion that the amount of knowledge relative to *the Diseases of Domestic Animals and their Cure*, which has been diffused through your paper, aside from all other matter contained in it, is worth more to any farmer than many times the cost of the paper.

And I here take occasion to remind you of the lamentable ignorance generally prevailing among farmers on the subject of the diseases of animals, and the proper method of treatment. With rare exceptions, farmers are ignorant on this subject, and the horse and cattle-doctors they are compelled to employ, are, most of them, vile quacks, knowing nothing of their business, and in their ignorance killing or ruining many a valuable animal. Even our physicians are generally as ignorant of comparative anatomy, as they are of the picture-writing of the Aztecs. In France men are regularly educated as veterinary surgeons, but I am not aware of any opportunity in this country of acquiring such knowledge. Our colleges, yielding to the demands of enlightened public opinion, are establishing professorships of scientific agriculture; but no college or school in the country, so far as I am informed, has given instruction on comparative anatomy, in connection with the cure of diseases affecting domestic animals. You have a flourishing medical college in your city which should take the lead in this matter. The city which furnishes the *first agricultural* paper in the country, should be the first to furnish correct information on this neglected subject. Furnish the graduates of that institution with as thorough knowledge of veterinary surgery, and its kindred branches, as they are taught on other matters pertaining to their profession, and their respectability or usefulness will not be impaired. They will then be able, without demeaning themselves, to benefit as well the property as the persons of their patrons; and in a pecuniary point of view will be gainers. S. A. Law. *Meredith, N. Y., Jan. 21*, 1848.

Fattening Hogs.

On the 11th day of April, 1846, I bought a sow and eleven pigs, the pigs being about three weeks old, for $12.25, and not having plenty of feed, (for I had recently changed my residence from Dutchess to Livingston,) I gave one pig away, and kept the rest, and fed them the milk of four cows, after it was well skimmed, with the slops from the kitchen, and the bran from 15 bushels of wheat, 8 bushels of oats, and 4 bushels of corn ground together. This was their feed till after harvest, when I turned them into the stubble, and fed them but very little till I shut them up to fat, which was about the first of October. I then put 9 of the shoats in a close pen, and fed them a few boiled potatoes and some raw apples—I should think not to exceed $5 in value—and about 50 bushels of ears of corn, half of which was of an inferior quality—the whole of the corn being worth probably $12. On the 16th of November I butchered four of them—sold these in Rochester—two of them for $3.75 per hundred, and the other two for $3.50 per hundred—the weight of the four 685 lbs.; the amount received for them $24.86. The other five I killed on the first of December, and they weighed 977 lbs., which I laid down for family use; but the pork was worth at the time $4 per hundred. The sow and shoat I kept to winter, and they were worth $8. This ends the first year; and now for the second:

The result of the present year I shall not be able to give with as much accuracy, perhaps, as I did those of the first, as I had grain of my own raising to feed, and did not measure it as I did the first year when I had it to buy. But judging from the improvement of the two lots, I should think the expense of feed about the same. About the first of April my two sows had pigs; the old one had 13, ten of which I raised, and the young one had 7, which I sold with the mother when about three weeks old for $9. After harvest this year, my pigs had a better chance in the orchard than last year, but not so good a run in the stubble. Last year they were not permitted to run in the orchard at all, on account of my having corn on the same lot. About the first of November I shut up the ten shoats and fed them principally on corn until the 30th November, when four of them were butchered, which weighed 878 lbs.; and sold for $5 per hundred—and on the 9th of December the other five were slaughtered, and weighed 1012 lbs.; which were worth $5 per hundred also. On the 22d of December, killed the old one, after having her shut up only about five weeks—she weighing 357 lbs., which was sold for $5 per hundred. This ends the account of both years, except the summing up.

Dr.	Cost of sow and pigs, April 11th, 1846,..............		$12.25
	Expense of summer feed and fattening, 8 bush. oats, at 2s. 6d., 4 do. corn, 4s., 25 do. corn, 3s. 6d., and bran from 15 bush. wheat, $2,..........................		18.06
			30.31
Cr.	By sale of 685 lbs. of pork,.................	$24.86	
	Value of 977 lbs., at 4c.. per lb.,............	39.08	
	Value of old sow and shoat to winter,......	8.00	71.94
	Leaves to pay for milk, whey, pasture, care, &c.,		$41.63

SECOND YEAR.

Dr.		Cr.	
Value of sow and pigs same as when purchased,.,....	$12.25	By 878 lbs. of pork, sold for 5c. per lb.,..........	$43 90
Expense of summer feed,	7.50	By 1012 lbs., worth 5c.,.	50.60
Of corn in fattening, 100 bush. at 50c. per bush.,	50.00	By 357 lbs., sold for 5c.,	17 85
			112.35
	69.75		69.75
			$42.60

Avon, *Dec.* 31*st*, 1847. S. S. MOREHOUSE.

Breeding Horses.

I have read Mr. Burnett's remarks in the Cultivator on the subject of breeding horses. He advocates the use of thorough-bred stallions with our common mares. As far as my observation has gone, the great error of breeders has been that they have consented to use any horse they meet with, provided he has a long pedigree.

Mr. B. seems to think there can be no such thing as a "horse of all work." I think the farmer wants a horse of that kind; he does not want one merely for the carriage or the cart, but for various uses.

As to the saddle-horse, the less the farmer has to do with him the better. Of what use is such a horse but to prance up and down a few minutes in a day for *amusement?*

And the "three-minute" horse—the farmer does not want him, neither does any one but a fop or jockey.

Again, I think a medium-sized horse, weighing from ten to twelve hundred, is best even for *draft.* They are easier to keep, and though they may not be able to draw as much at a load, they are quicker, and generally more tractable. I am in favor of rearing *good* horses, as they cost no more than long legged, slab-sided, worthless animals.

I do not understand Mr. Burnet's objection to having a mare well ribbed up. He says:—"I would not have her too closely ribbed up, for this is objectionable in either mare or horse." I do not understand *wherein* he thinks this an objection, especially as he says it is desirable that the foal should be *close* in this respect.

JUNIUS. *Farmington, Ct.*, 1848.

Subsoil Plowing.

ELIAS PHINNEY, Esq., Lexington, Mass., is of opinion that a great benefit would be derived from subsoiling on "hard New England soils," as a protection against drouth. The stirring and deepening of the subsoil gives plants an opportunity to extend their roots, so that more moisture is brought within their reach. Mr. P. observes, that on fields which have been long cultivated, a crust is formed at the depth to which the land is usually plowed, which becomes almost as impenetrable as the highway which has been travelled over for a like number of years. He has practiced subsoiling considerably for several years, and states that the increase of crops in consequence of this operation has never been less than 25 per cent. He derived less benefit from subsoiling last year than usual, owing to the more regular supply of rain through the season; yet on a dry loamy soil, with a hard, gravelly subsoil, he obtained a greater yield of potatoes by one-fourth, from subsoiled rows, though planted side by side with others not subsoiled. This was not the only difference—for the potatoes from the subsoiled portion were so much superior in appearance, that they actually sold in market for 25 per cent. more than the others—making an advantage from subsoiling, in both quality and quantity, of 50 per cent.

DEAN ROBINSON, of West Newbury, Mass., also states that he has used the subsoil plow on land which has a very hard subsoil, "composed of clay, gravel, and small stones." His custom has been to follow the sward plow with the subsoil plow, both of which stir the ground to the depth of 20 inches. He considers the cost of this mode double that of common plowing; but he thinks the extra expense is fully compensated in the saving of labor in after cultivation, as the land is much lighter and is easier worked after subsoiling. He also uses the subsoil plow on his garden, and on all land designed for the growth of tap-rooted vegetables. We gather these facts from the Transactions of the Essex (Mass.) Ag. Society.

Good Cows.

From the statement of competitors at the show of the Worcester County (Mass.) Ag. Society, we gather the following:—**M. G. MAYNARD**, of Westborough, offered a cow eight years old, one-fourth Durham, which calved the 12th of May. In ten days, from the 10th to the 20th of June, she gave an average of eighteen five-eighths quarts per day. In the same length of time, from the 10th to the 20th September, she gave an average of 13 5-8ths quarts per day. Her feed was pasture, in common with other cows.

CHARLES WILCOX, of New Braintree, offered two cows. One of them, eight years old, calved 11th May. In ten days, from 1st to 10th June, gave an average of 20 6-10th quarts. In ten days, from 1st to 10th September, she gave an average of 14½ quarts per day. The other cow offered was of the same age, and calved at the same time as the above. In ten days, from the 1st to the 10th of June, she gave an average of 20 6-10th quarts per day; in the same length of time, from the 1st to the 10th of September, an average of 14 4-10th quarts per day.

Wm. S. Lincoln, of Worcester, offered one cow. She was seven years old, and calved 27th May. In ten days, from the 1st to the 10th of June, she gave an average of 16 7-10th quarts per day, which yielded in the ten days, 16 lbs. and a fraction of butter. From the 6th to the 15th of September, she afforded an average of 10 4-10th quarts per day, which yielded in the ten days, 14 lbs. 10 oz. of butter.

Nahum Warren, of Shrewsbury, offered a cow, four years old, from which 13 lbs. of butter were made in 10 days in June; and 10 lbs. in the same length of time in September.

Jacob W. Watson, of Princeton, offered a cow, from which 18¼ lbs. of butter were made in ten days, from 10th to 20th June; and in ten days, from the 10th to the 20th September, 13¾ lbs.

Charles E. Miles, of Shrewsbury, offered two cows six and seven years old. They had been kept for the purpose of fattening calves for veal. One cow calved on the 15th of February. When taken to the show, in September, she had a calf by her side, and she had then fattened four calves, whose veal weighed 380 lbs., and sold for $30.40. The other cow calved on the 25th of March. She fattened her own calf and four others, whose weight of veal was 450 lbs., and sold for $36. Mr. Miles had three other cows which were used for fattening calves. From the five, 2,050 lbs. of veal, which sold at an average of 8 cents per pound, and brought $164.

The Committee make some observations in regard to the quality of milch cows which are worthy of attention:

"It is supposed that a cow of *medium* quality will give, for two months after calving, 12 quarts of milk per day; four months following, 7 quarts; two months, 4 quarts; one month, 2 quarts—amounting to 1,860 quarts, or an average for nine months of about seven quarts per day. It will take ten quarts of milk to make one pound of butter; thus producing about 186 lbs., which at 16 cents, amounts to about $30. Suppose every farmer to resolve that he would keep no cow that did not hold out as a good milker for ten months in the year, and that did not give, for two months, 16 quarts per day; four months, 12 quarts; three months, 7; one month, 2—amounting to 3,090 quarts, or an average of ten quarts per day for ten months? Is it not practicable to have, throughout the country, cows as good as the last described?"

Potato Disease or Rot.

We have received from Rev. **Chas. A. Goodrich**, of Hartford, Ct., an article first published in the *Hartford Courant*, in reference to the potato disease. An enumeration of some of the causes assigned for this malady is given from an English paper, the principal of which are:—Attacks of parasitical fungi, insects, ("the idlest of all speculations," says the English authority,) frost, lightning, exhausted vitality, bad cultivation, manures, miasmata, such as produce cholera in men, and other epidemics. Mr. G. thinks none of these causes appear tenable, "unless it be the last." He observes—"it seems apparent, at least to the writer, that the disease did not originate in the soil, nor is it attributable to any defect in the potato itself. The remote cause is some peculiar change in the *atmosphere*, which we may never understand: the proximate cause, consequent upon that change, is the *derangement of the functions of the stalk and leaves*."

Mr. G. holds that the leaves and stalks are first affected, through this atmospheric influence, and that the vitiated juices are transmitted to the tubers, thus laying the foundation for their disease and decay. Its effects, he believes, are something in proportion to the stage of growth the tubers are in when the tops are attacked. Hence he observes—"If the tuber was but half grown, the stalk would be proportionately green, and the injurious process would be longer continued. If the potato was nearly ripe, still the process might proceed, and acrid food be transmitted sufficient to cause its decay in the course of weeks or months. And does not this," he continues, "account for the fact that potatoes which appear fair and sound for some time after they are housed, ultimately betray symptoms of disease, and in the course of the winter become worthless? They were inoculated with the disease, and in process of time the infection breaks out. Upon this theory different varieties would suffer unequally, being more or less hardy, and the same variety on different soils might also be differently affected. * * * *

"Should the inquiry be made, why some fields, either in whole or in part, escape the ravages of this disease, while contiguous crops are entirely ruined, the reply is, that it will be in season to answer the question, when the interrogator shall explain why some peach trees escape the yellows, while others wither and die under that scourge—or some pear trees escape the blight, while neighboring ones are ruined; and especially why the frost plays such 'fantastic tricks' in a field of corn, nipping here and there some whole rows, and then again sparing nearly every alternate hill."

As to remedies, Mr. G. thinks it is "by no means certain that a remedy may not yet be discovered," and he advises that experiments be multiplied every succeeding year. His "chief hope," however, is that "in the course of a few years the cause of the injury in the atmosphere will gradually disappear."

Suggestions to Farmers.

I sometimes fancy to myself, when I hear persons who live on the rich and fertile prairies of the west, praise the luxuriance of their soil, and boast of the bountiful crops they yield with little labor, that they ought to be regarded somewhat as we now look upon those early settlers in the Mohawk valley, who, it is said, were in the habit of carting the manure made upon their lands to the river, and throwing it in, for fear, that should it remain, their lands would become too rich.

In their wisdom, supposing their lands could never be exhausted, they continued to plow the same fields, until at last "a change came o'er the spirit of their dreams," and they found to their cost, that the lands they supposed inexhaustibly fertile, had become sterile and unproductive; and such I think will be the result of the present system of cultivation pursued by our western friends. Chemistry shows us that by taking a succession of crops off from the same ground one year after another, without any return to it, the inevitable effect must be ultimately, that it will lose its fertility. The lands of our county, especially the richer portions of it, have quite too commonly met with this usage. A few years since it was not unfrequently remarked by our farmers, that they formerly received good crops from particular portions of their lands, but that then they could not get crops from the same ground that would pay the trouble of cultivation. Something, they said, must be wanting in the soil, but what they did not know. Chemistry has solved this problem, and it is now beginning to be understood by them, that their soil must be fed with proper food as well as their cattle if they would have it productive; and that true economy consists in highly cultivating smaller quantities of land, by deep plowing and manuring, rather than running over a large quantity of land with slight tillage.

> "A little farm well tilled. A large barn well filled.
> A little wife well willed, Give me, give me."

This lesson is one our farmers have been slow to learn. While it has been their practice in cultivating their gardens to resort to thorough tillage, and, as a consequence, they produce more from them than from any other equal portion of their land; in the raising of field crops the hint thus given them has been entirely neglected. It is supposed that the fruit and kitchen gardens in the vicinity of the city of London, occupy 20,000 acres of land, and that the produce of this land is sold for over $7,000,000, while in the most favored portions of farming lands in our own country, $500,000 would generally be considered a good product for the same quantity of land. Knowledge and experience will in time correct the errors into which our farmers have fallen in regard to cultivating their lands, and even now I think I see a bright prospect for the future, in the formation of agricultural associations, in the circulation of agricultural papers, and other periodicals; in the improvement of the farm stock; in the improved tillage and drainage of lands; and above all, in the increased attention given to the saving and use of manures. When these come to be well understood and practiced, we may confidently expect to see farms of 40 and 60 acres producing more, and returning a better and more certain profit to the farmer, than farms now do which contain many additional acres. ONEIDA.

Varieties of Wheat.

We have been experimenting some in the wheat line, having procured from Philadelphia, in the fall of 1846 some of the celebrated "Stewart," or "Etrurian" wheat, and also some of the "White Blue-stem," from Mr. Hunter, of Lycoming County, Pa., and some of the "Yellow Blue-stem" from our own neighborhood.

The Stewart wheat is a fine grain, and has a long head; but we could not tell so well how it would succeed, for the frost killed half or two-thirds of it. The other kinds stood the winter well; but the White Blue-stem is far the finest grain—has the longest head, and yielded a fourth more than the Yellow Blue-stem, although sowed side by side, on the same kind of ground. In fact, the White Blue-stem is with us every way equal to the Stewart wheat, without the danger of being winter-killed. We have sowed no other kind this year, and have distributed the seed among our farmers.

SUBSOIL PLOWING.—We have been trying the subsoil plow on our hilly land, and find it will fully pay in preventing washes by rain, besides being very useful in other respects. It causes the soil to act somewhat on the sponge principle; that is, if the ground is made mellow twelve or fifteen inches deep, it absorbs the water that will fall in an ordinary rain; whereas if only three or four inches of the surface is loosened, as is generally the case, it is soon filled with water, and a sudden dash of rain washes the soil away, leaving the fields cut up in gullies. JAMES L. COX. *Zanesville, O., Jan.* '48.

Good Hogs.

Much is said about good and poor breeds of hogs. I am willing to admit that there is all the difference ascribed, but the poorest breed that a man ever had is as good as any breed to many. I killed seven hogs this fall that averaged 455 lbs each. They were a year old last spring, except one, which was older, and weighed 580 lbs. These are not the heaviest hogs I *know*, but the breed is not extra, and there was no extra pains taken in keeping them. I sold them at $5½ per hundred, when lighter ones brought $4.75 and $5. I have some pigs now feeding which were dropped last March, that if dressed, would weigh over 300 lbs. each; they have been only middling well kept—not extra. The grain that I fed my hogs, aside from the dairy refuse, (which was whey,) was worth here just about $80. E. P. INGALLS. *Cape Vincent, N. Y., Jan.*, 1848.

Hints for March.

Cows and ewes, which are near the period of parturition, require attention. For three or four weeks before they bring forth, their food should be of such a nature as will impart strength to them and their offspring, and at the same time promote the secretion of milk. Brewer's grains, where they can be obtained, are among the cheapest and best articles that can be used. They may be fed to cows at the rate of a peck for each cow, per day, before calving, and a half-bushel per day afterwards. Sheep may be fed from one quart to three quarts per day. Where the grains cannot be had, a little corn or oats, for sheep—say a pint of oats, or from a gill to a half pint of corn to each, per day, and for cows, corn meal, or meal from corn and oats; or corn and cob ground together, at the rate of from two to four quarts each per day, will be beneficial. A few carrots—say a peck to a cow, and a quart to a sheep, per day—will greatly favor the secretion of milk, and may be given with advantage in addition to the meal or corn. The best of hay should be provided. Clover, cut before it was too ripe, and so nicely made that none of its heads or leaves have been lost, and is free from mustiness and dust, is not inferior to any other hay, excepting for working horses and oxen. The animals should have dry and comfortable shelter, and should not be exposed to storms.

March is the best month in the year for securing wood and timber. Wood should therefore be cut, split, and piled, that it may have the benefit of the drying winds which usually prevail during this month.

Hot-beds, if not already made, should be formed at once. Directions for making will be found in our last volume, page 85—also in vol ix, (old series,) p. 55.

Manures may be composted in this month, and will be sufficiently decomposed for use by the time they are wanted for spring crops.

Oats may sometimes be sown in the latter part of this month or beginning of April. It is always advisable to sow them as early as practicable, or as soon as the ground is in a suitable state. The best varieties of the Irish and Scotch oats are very heavy, and from some trials made here with them, appear to exceed in yield and value the common oats of this country. The Hope-Town oat is one of the best kinds. It is early, hardy, and productive. An advertisement of seed of this variety will be found in this number.

Agricultural Discussions.

Weekly meetings for the discussion of agricultural subjects, have been held at the Capitol in this city, since the 12th of January last. They have generally been better attended, and have been carried on with more spirit than in former years—circumstances indicative of a growing interest in agricultural investigation. This is evidently the case in most parts of the country. In Boston, where these meetings were commenced nine years ago, they have been continually increasing in popular favor.

Considerable interest is evinced in the reports of these discussions, and we have had various inquiries in regard to their publication; but as our work is only issued monthly, it would be impracticable to give them as early as would be desired. Besides, the great press of other matters at this season of the year, precludes their insertion in detail. They are published in the Albany *Evening Journal*, and will appear, (perhaps somewhat abridged,) in the Transactions of the State Agricultural Society.

At Boston, the reports of the discussions are published in three or four of the daily and weekly papers. This gives them an extensive circulation, and it would be an advantage if this course was adopted here.

The first subject taken up at the Albany meetings was that of Manures—their Properties, Action, &c. This occupied one evening, and a second evening was devoted to a consideration of the question whether manure should be applied in a fresh or fermented state—or under what circumstances it should be applied in either form. After considerable discussion the following resolution was unanimously adopted:

"*Resolved,* That in the judgment of this meeting, it is generally most expedient to apply manure in an unfermented state on clayey or stiff soils, and particularly for hoed crops, and that it should be well incorporated with the soil: on lighter soils, whether of a sandy or gravelly character, it is far more profitable to make the application in a fermented compost, for nearly if not quite every kind of crop."

At the third meeting, Dr. A. H. Stevens, of New-York, delivered a very interesting lecture on "The Food of Plants;" and after its conclusion, the subject of Sheep and Wool—their Management and Preparation for market, was taken up for discussion. Mr. Blanchard, of Kinderhook, made some excellent remarks, generally in reference to the manner in which wool should be put up for sale, and the mode of disposing of it to the best advantage; in doing which he considered the expediency of establishing "Wool Depots," and demonstrated, conclusively, the advantage and superiority of the system for the advancement of the interest of the wool-grower, as well as for the convenience and accommodation of the manufacturer.

The same subject was continued at the succeeding meeting, and considerable interesting matter in relation to the breeding and management of sheep was brought out. At the close of the meeting, the following resolution was passed:

"*Resolved,* That we deem the establishment of wool depots for the sale of wool, well calculated to secure to the wool grower a fair and reasonable compensation for his wool, and that the system is worthy of a full trial."

Agricultural Societies.

Washington County, Vt.—Officers for the present year—Roderick Richardson, Presidents; Nathaniel Eaton, Henry Nutt, Vice-Pressdent; J. W. Howes, Secretary; Lyman Briggs, Treasurer.

Wayne County, N. Y.—Officers, A. G. Percy, President; N. B. Caswell, Rec. Secretary; H. Knowls, Treasurer. Next Fair to be held at Lyons, on the 4th Wednesday and Thursday of September. Delegates have been appointed by this society, to attend the fairs of the adjoining counties, for the purpose of collecting useful information. Other societies would do well to adopt the same plan.

Oneida County, N. Y.—Officers, J. S. Hitchcock, President; H. Rhodes, P. Mattoon, M. L. Butler, R. Eells, W. C. Burritt, P. Norton, H. N. Cary, H. Dunbar, W. Ferguson, W. Bristol, Vice President; C. C. Cook, Cor. Sec'y.; E. Comstock, Rec. Secy; B. N. Huntington, Treasurer. Premiums were awarded at the annual meeting of this society for the following crops:—*Winter Wheat,* 39 bushels 8 1-2 lbs. on one acre. *Indian Corn,* 86 1-4 bushels, also 71 1-2; 67 1-8 bushels, another of 67 1-8 bushels, 66 bushels, each the product of one acre. *Barley,* 52 bushels, 35 pounds, also 49 bushels 24 pounds; 38 1-2 bushels—each the product of one acre. *Oats,* 85 3-4 bushels, 84 1-2 bushels, 76 bushels, each from one acre. *Peas,* 37 3-4 on seven eighths of an acre. *Potatoes,* 162 bushels on half an acre. *Carrots,* 201 bushels on a fourth of an acre. *Mangel wurtzel,* 325 bushels on a fourth of an acre.

The Jefferson County (N. Y.) Ag. Society, at its last annual meeting awarded premiums for the following crops. *Indian corn,* 86 bushels, 80 bushels, each from an acre. *Oats,* 74 bushels per acre. *Potatoes,* 347 bushels per acre. *Carrots,* 764 bushels per acre.

Chittenden Co. Vt.—Officers for the current year. Henry S. Morse, President; Birdsey Newell, Lemuel B. Platt, Vice Presidents; Caspar T. Hopkins, Secretary; John S. Pierce, Treasurer. The Society at its last meeting awarded premiums for the following crops. *Winter wheat,* 36 1-2 bushels and 30 bushels each for one acre. *Spring wheat,* 26 bushels per acre. *Indian corn,* 210, 209, 197, 191 bushels of ears each on one acre; calculated to be equivalent, respectively, to 105, 104½, 98½, 95½ bushels, of shelled corn per acre. *Oats,* 79 bushels, and 70 do. per acre. *Potatoes,* 195, 190, 189 1-2 bushels—each from half an acre. *Carrots,* 332, 280, 232 bushels—each from one fourth of an acre. *Peas,* 47 1-2 bushels from one acre. *Beans,* 30 bushels from half an acre.

Vernon Ag. Association—Nathaniel S. Wright, President; Salmon Case, Willette H. Shearman, Elijah Wilson, Samuel H. Church, Vice Presidents; Levi T. Marshall, Vernon Centre, Cor. Sec'y; Luther R. Foot, Rec. Sec'y; Josiah Case, Treasurer.

Domestic Economy, Recipes, &c.

A convenient Swift.

Every man or boy who has kindly held the skein of thread or yarn on his extended wrists, to assist the housewife to wind it into a ball, until the *arm-ache* has compelled him to desist, will know the convenience of a simple machine to perform this task. The one figured below is so incomparably superior to anything of the kind we have ever met with, and besides appears to be so little known, that we are induced to give a description. It may not be new to some, as it has been in use for thirty years or more, yet we have scarcely ever met with it for sale in any shop in the country.

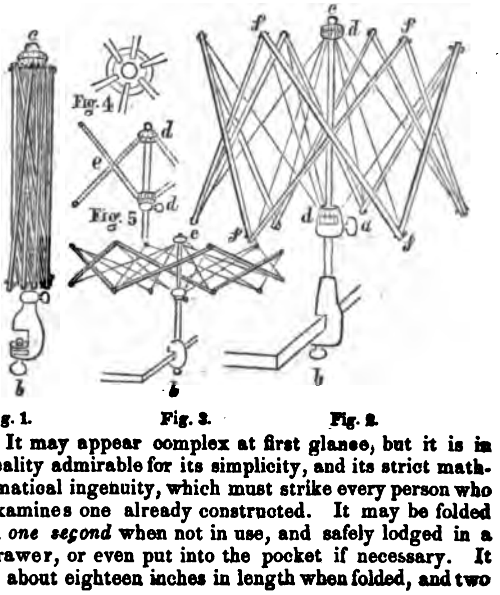


Fig. 1. Fig. 3. Fig. 2.

It may appear complex at first glance, but it is in reality admirable for its simplicity, and its strict mathematical ingenuity, which must strike every person who examines one already constructed. It may be folded in *one second* when not in use, and safely lodged in a drawer, or even put into the pocket if necessary. It is about eighteen inches in length when folded, and two inches in diameter.[*] Fig. 1, exhibits its appearance when not in use; fig. 2, when partly opened, and screwed to the edge of a table by the button *b*; and fig. 3 the same on a smaller scale, extended to its extreme limit. It is adapted to a skein of any length from six inches to three feet,[†] by raising or depressing the sliding ring, and fixing it by the button and screw *a*. The upright standard, *b c*, which is screwed to the table as shown in the figure, when in use,—is furnished with 2 circular rings *d d* for receiving the ends of the rods, and on which they form a turning joint, precisely like the 2 rings of an umbrella which receive the inner ends of the rods and braces. The upper one is immovable, the lower one slides freely. A cross section of one of these rings is shown in fig. 4, the dotted circular line being the wire which passes through the ends of all the rods, forming the joints. The rest consists of 18 slender pieces of wood or lath about 14 inches long, half an inch wide, and the tenth of an inch thick, with a hole at each end to receive a cord for fastening the ends together. Six of these are fastened by the moveable joint to the upper ring, and six more to the lower; and the corresponding upper and lower ones cross each other as shown in fig. 5, at the middle, *e*, where a rivet passing through both, forms a turning joint. The remaining six are fastened to the outer ends of these first twelve, by cords through the holes at the extremities, these last six also crossing each other by couples, and riveted as before mentioned, at the crossing point; as shown for instance by the two rods *ff*, *ff*, in fig. 2. To prevent confusion, the twelve inner rods are represented in fig. 2, by merely dotted lines.

We should think that the whole could be easily made for a dollar, being wholly of wood, except the wire and cords. We have used one many years, and it never gets out of order.

Tin Vats for Cheese.—A correspondent of the Prairie Farmer describes the tin vats which are used by the Herkimer cheese makers in this State with so much success, as follows:—One for a dairy of 30 cows is 2¼ ft. wide, 6 ft. long, and 19 inches deep; set inside a wooden vat, so as to leave a space of 2 inches between them, that the tin vat may be surrounded with water. The night milk is strained into the tin vat, which surrounded with cold water, is kept till morning. After the morning milk is added, the water is heated by a steam pipe to about 84° by the thermometer. Rennet is applied, and the resulting curd scalded by the same way, at 104°. The whey is then drawn by a plug. One farmer, who has 70 cows, finds it about as easy to make cheese from them (weighing one hundred and fifty to two hundred and twenty pounds,) as from a dozen cows by the old process.

Female Industry.—The value of straw and palm-leaf hats, &c., made by females in Massachusetts in 1847, was $1,640,596.

Answers to Inquiries.

Emir or Skinless Barley.—W. A., Canajoharie, N. Y. We have but little information in regard to this kind of grain, in addition to what we have already published. That it is more "valuable" *per bushel*, as bread-stuff, or for stock than common barley, there is no doubt, as it is considerably heavier. Of its value for *malting* we know nothing. It is represented as hardy, and as yielding more *weight* per acre than the common kind. We suppose its chief recommendation, however, is its freedom from husk, which renders it more convenient as an article of food for families.

Sowing Carrots.—L. P., Proctorsville, Vt. On light soils, we should prefer leaving the surface level, and would sow the seed with a machine, in rows, fourteen to sixteen inches apart. If the ground is inclining to be wet and heavy, we should sow on ridges, which might be made by a small double mould board plow.

Hand or Horse-Mill.—W. J. B., Hillsboro, N. C. We know of no hand-mill that it would be an object to use for the purpose you mention. Fitzgerald's mill, which can be moved with one horse, but to much better advantage with two horses, will do a good business at grinding any kind of grain, and will make good flour or meal. The cost of the mill is $70.

Corn-and-Cob-Cutter.—C. L. T., Claridon, Ohio. Pitts' corn-and-cob-cutter will cut up corn and cob about the fineness of what is called "coarse feed," and can be worked with any two-horse power. They may be had here, or of the manufacturer, John A. Pitts, Rochester, at $40 each. Sinclair's corn-and-cob-cutter is manufactured at Baltimore. Md. It is said to do good work with a two-horse power. It crushes the corn and cob between cast-iron plates. Its cost is $32, with a set of extra plates. They may be had here or at Baltimore.

Saw to be worked by horse-power.—J. A., Morrisdale, Pa. We do not know of any two-horse power that would answer to saw "common boards" *from logs*; but a good endless-chain power, calculated for only one horse, would do well for slitting up boards or plank, in almost any form, or for cutting wood into any desired lengths.

Cheap Fences.—T., Bucks county, Pa. We would refer you to the last volume of the Cultivator, page 51, for descriptions of several kinds of fences, some of which would probably be adapted to your purpose.

Culture of Beans.—The kind generally preferred at the north is called the "pea bean." The usual distance of the hills is three feet by one foot, (or one foot and a half.) Twelve quarts of seed are used to an acre. They are planted from the middle of May to the first of June. The usual yield is from fifteen to thirty-five bushels per acre.

Docking Lambs.—S. W., North Easton, N. York. When the tails of sheep are allowed to remain their full length, the manure frequently attaches to them, and by this means adheres more or less to the wool with which the tail comes in contact, by which considerable injury is done the fleece. We suppose the object in cutting off the tail, is to avoid the consequences mentioned, and this object, we think is, in part at least, effected.

Apple for a name.—J. S. S., Bridgeport, Ct. Your apple has been examined by several judges of fruit, but no one can tell what it is.

Rat-Proof Granaries.—In the Cultivator of this month, you ask for suggestions in regard to a "Rat Proof Granary or corn crib."

Put your crib on cedar posts, four feet from the ground, tinning the posts one foot down, immediately under the crib sills and cover the top of the posts with a tin pan, like the ordinary milk-pan, inverted, or bottom next the sill; and if you will always remember to take away the steps by which you enter the door of the crib, you will not have rats or mice. A Subscriber.

Paterson, N. J., Feb. 3, 1848.

Death of Horses by Poison.—Seven horses belonging to Thomas Craig, of Philadelphia, were lost a few weeks ago, in consequence of the infusion of poison, by rats, into their feed; an adjoining stable, which was much infested by rats, having been plentifully supplied with poison, which they carried abroad.

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[*] That the wooden screw *b* may firmly hold to its socket, a wooden pin through which it passes, is driven into the base, as shown by the dotted lines in fig. 1.

[†] Very small ones, that may be put into the vest pocket, are sometimes made for winding skeins of silk, and other small articles of the kind; the above described is intended for large skeins of yarn, as well as smaller.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Postage of "The Cultivator."—We learn with surprise that several postmasters in different sections of the country, insist on charging "The Cultivator" with *pamphlet* postage. No one who will read the post office law, can doubt for a moment that the Cultivator is clearly a newspaper in the meaning of that law. Beside this, every Postmaster General, since the establishment of the paper, has *decided that it was subject to newspaper postage only*. We republish the decision of the present head of the Post-Office Department upon the subject:

Appointment Office, P. O. Dept, Feb. 14, 1846.

Sir—In reply to your letter of the 10th inst., I have to say that "The Cultivator," published at Albany, N. Y., in the form it which it is transmitted for the decision of the Department, is regarded as being subject to newspaper postage only. I am, sir, respectfully yours,

W. J. BROWN,

Luther Tucker, Esq. 2d Ass't. P. M. General.

Communications have been received the past month from R. H., S. A. Law, S. W. Jewett, Oneida, Bucks Co. Farmer, F. J. Scott, A Subscriber, R. K. Tuttle, F. Holbrook, A., Samuel Wilbur, J. B. Burnett, An Old Milker, J. Ten Broeck, W., C. E. G., F. J. Scott, H. R. Congdon, P. D. S., J. D., Andrew Bush.

Books, Pamhlets, &c. have been received during the past month, as follows:—Transactions of the Mass. Hort. Society, No. I., from the President M. P. Wilder Esq.—Transactions of the Worcester Co. (Mass.) Ag. Society for 1847, from Col. J. W. Lincoln.——Proceedings of Greene Co., (N. Y.) Ag. Society, from H.G. Day, Esq.——Rev. Dr. Allen's Historical Discourse, on the 40th anniversary of the gathering of the 2d church, Dorchester, from M. P. Wilder, Esq.——Ewbank's Hydraulics and Mechanics, Parts II and III, from the publishers, Greeley & McElrath, New-York.——Transactions of the Ohio Fruit Grower's Convention, held at Columbus in September last, from M. B. Bateham, Ed. Ohio Cultivator.——Lectures on Ag. Chemistry, before the Senior class of the University of Georgia, by Prof. J. Le Conte, M. D.——Report of the Buffalo Hort. Society for 1847.——Annual Report of the Mass. Insane Asylum, Worcester, for 1847, from Dr. Geo. Chandler, principal of the institution.——Transactions of Trumbull Co. (O.) Ag. Society, for 1847, from F. E. Stowe, Esq.

Elkanah Watson.—We have great pleasure in being able to present our readers this month, with a brief, but very interesting memoir of Elkanah Watson, Esq., the founder of the Berkshire Ag. Society, and by whose efforts the first Cattle-Show was held in this country. For a large portion of the facts embraced in this memoir, we are indebted to W. C. Watson, Esq., of Port Kent, who we are pleased to learn, is preparing for the press a memoir of his father, to embrace extracts from his Diary and Correspondence, a work which, from Mr. W.'s association and correspondence with the most prominent men of his age, both at home and abroad, cannot fail of being read with great interest. The Portrait, which accompanies the memoir, is engraved from one given in Mr. Watson's "History of Ag. Societies," published in 1820.

Wood's Patent Cast-Iron Plow.—A bill has passed the Senate of the United States, to renew the patent of Jethro Wood, for his improvements in the cast-iron plow, for the term of seven years. This patent was originally taken out in 1819, and has been once renewed, extending to a period of twenty-eight years. Without meddling with the question of the merits of Mr. Wood's claim to the improvements which were patented to him, we cannot but think that the patent should now be permitted to expire. Jethro Wood's plow was, it is well known, far inferior to the best plows of the present day. But it is claimed that few or none of these plows can be made without an infringement of Wood's patent. If this be the case, it would seem an act of great injustice to the farmer, to compel him to use a plow of the old patent of 1819, or to pay a tax of 50 cents for the use of a plow which later inventors have brought to a much higher state of perfection. Few can doubt but that Mr. Wood, or others for him, received in the twenty-eight years which his patent has already covered, an equivalent from the public equal to the benefit conferred. Had Mr. Wood followed up his improvement, and made a plow equal to the best now in use, there would have been more justice in the claim for the renewal; but as he left this work to be performed by others, it appears to us that neither his heirs nor those to whom he assigned large portions of his patent, have rightly any further claim upon the public for protection; especially as this protection cannot be given without positive injustice both to the farmer and to later improvers of the plow.

Horticultural Exhibition.—The meeting for the exhibition of winter fruits of the Albany and Rensselaer Horticultural Society, was held at the Agricultural Rooms, Albany, on the 11th of February. There was a handsome exhibition of apples and a few pears. Among the apples were the Swaar, Vandervere, Spitzenburgh, Seek-no-farther, Blue Pearmain, Roxbury Russet, Rhode Island Greening, Newtown Pippin, Northern Spy, Winter King, Scolloped or German Gilli-flower, Bristol apple—the two latter excellent apples not common here. The pears were a seedling from Henry Snider, of Kinderhook; and Inconnue of Van Mons, Easter Beurre, Prince's St. Germain from Dr. Herman Wendell, of Albany. Dr. Wendell received the first premium on pears, and W. Newcomb, of Pittstown, Rensselaer county, the first premium on apples. Dr. Beekman, H. Snyder, T. M. Burt, Peter Kingman, of Kinderhook, sent fine samples of apples, as did also Mr. Briggs, of Schaghticoke, Mr. Rhodes, of Albany, and Mr. Frost of Chemung county. Mr. Wilson, of Albany, made a beautiful display of camelias and other flowers appropriate to the season. Col. Rathbone, the President of the society, presented (through his gardner) some fine bunches of asparagus. We did not learn the particular mode in which it was produced.

Death of Henry Watson, Esq.—We learn with much regret that this gentleman died suddenly, at his residence in East Windsor, Ct., on the 27th January last. He was widely known as an active and enterprising agriculturist and stock-breeder, having been extensively engaged in rural pursuits for a period of forty years.

Rock Salt.—We invite attention to an advertisement of this article in the present number. It is the English rock salt in its crude state. It is in lumps, of the size of a man's fist to the size of a man's head. It is very hard, and will not readily dissolve; hence it is the very best kind of salt for feeding stock—as it may be placed on stones, or in troughs, in the pastures, and will not waste away; but the animals can obtain whatever they desire by licking it as their appetites prompt them. We recommend the article as the cheapest and best of the kind for the purpose mentioned.

Mr. Ayrault's Fat Oxen.—These oxen, which were noticed in our January number, we understand were slaughtered about the 1st of February. Mr. Mahoney, of this city, has furnished us with the following memorandum of their weight, which he received from Mr. B. Lawrence, of the Centre Market, New-York, who slaughtered the cattle, and sold their beef: Live weight of the two, 5,522 lbs.; dressed weight—quarters 3,650, tallow, 512, hide 214 = 4,376 lbs. They sold, alive, for $550.

Baldwin's Churn.—This article was invented by E. Baldwin, of Ballston, Saratoga Co., N. Y. The advatages claimed for it are—its simplicity and cheapness, and the small power with which it may be operated. It does not differ materially from the "cradle-churn," which has been used in some sections for many years.

Farmer's Clubs.—We are pleased to learn that these associations are increasing in the country, and that they are highly approved for their beneficial results. Mr. Guy Bigelow, of Colchester, Conn., writes us that an "Agricultural Association," was formed in that neighborhood in 1842. It was made a rule that not less than six, nor more than twelve men, with their wives, should "meet monthly at the residence of the members, in alphabetical order, and spend the afternoon and evening." Mr. B. says—"these meetings are considered interesting and beneficial. Each member pays into the treasury $1 annually, and has a copy of the Cultivator."

Manufacture of Cheese.—Mr. L. B. Maltby, of Trumbull County, Ohio, wishes information in regard to a steam apparatus used in the manufacture of cheese, which he has been told has been introduced by Mr. Gordon Farmer, of Mohawk, Herkimer Co., N. Y. If some person will give us a description of this apparatus, together with its expense, &c., they will confer a favor. Mr. M. also wishes information through the Cultivator, in regard to the mode of manufacturing the "Hamburgh cheese, of Erie county, N. Y." We hope some of our correspondents in that section will forward us the information called for.

Cultivator for Agricultural Societies.—At the last annual meeting of the Caledonian Co. (Vt.) Ag. Society, it was resolved, "That a copy of the Albany Cultivator, for one year, be furnished to those members who pay one dollar into the treasury the present year."

Ashes on Potatoes.—Mr. W. R. Webb, of Clark County, Ohio, states that in planting his potatoes last year, he used on a portion of the lot "about a shovel-full of leached ashes on each hill," and that on this part the potatoes were not hurt by the rot. On another part of the lot, where no ashes were put, two-thirds of the potatoes, as stated, rotted. Mr. W. inquires whether the ashes saved the crop. We can only say that the effect of ashes on the growth of potatoes is generally favorable; but in regard to the prevention from rot, results are so contradictory, that we would not venture a conclusion.

Smith's Corn-Sheller.—Elijah Willard, Esq. of Union county, Illinois, writes—"I purchased in St. Louis, Smith's Corn Sheller; it is now daily in operation, and shells, with three hands to feed it, one hundred bushels of shelled corn per hour; the work being done in a handsome and complete manner. It is attached to the Horse Power I bought of you last summer, and run by it."

Wheat in Indiana—M. Averill, Esq., of Lima, La Grange county, Indiana, informs us that the wheat crop in that section, for 1847, was very light. It suffered much by the winter, and afterwards from the attack of the fly. In relation to the quantity of wheat on hand, Mr. A. says—"I see it frequently mentioned in eastern papers, that the '*Farmers of the West*,' were, to a great extent, holding back their wheat crop for spring market; but so far as the four counties in the north and northeastern parts of this state, and the south and southwestern counties of Michigan, and a *large part* of Illinois and Wisconsin are embraced in these conjectures, it will certainly be found to be *a great mistake*, as I believe there has not been a season in the last four or five years, when there was any thing like so *small* a quantity of surplus wheat, retained in the country as at this time; nearly the entire surplus went forward in the fall, and is sold."

Best manner of Wintering Stock.—At a late discussion in relation to the above subject, by the "North Stockbridge (Mass.) Farmers' Club," it was almost the unanimous opinion of the members, that it was best to feed wholly under cover, as being most economical, both as to saving of food and manure. Several farmers spoke of the benefit of feeding cows "rye mush" for a short time before they calve. It was also the general opinion that much loss was sustained by farmers, from their stock being allowed to get poor at the setting in of winter, and it was advised to guard against this by feeding well at first. It was thought that hay was generally cut too late. It was advised to feed stock a little at a time and often—five or six times in twenty-four hours.

Good Crops in Vermont.—The agricultural society of Washington county, Vt., awarded premiums for the following crops of Indian corn: 1st premium, 106 bushels per acre; 2d do. 100; 3d 86½; 4th, 80½ bushels. In the latter case, the whole crop was shelled and measured; in the former cases two bushels of ears were taken as the equivalent of a bushel of corn. The same society also awarded premiums for the following crops of potatoes: 1st premium, 310 bushels per acre—variety, Long-Red, or Merinos; and 2d premium 285 bushels, round Pink-Eyes. (The same person also produced 285 bushels Long-Reds per acre.) The 3d premium 205 bushels per acre, Pink-Eyes. All the crops of potatoes were free from rot. They were produced, mostly, on "loamy" soil. Some of the crops having been on sward, broken up the previous fall, and others on stubble ground—oats, on sward, having been the previous crop.

Good Hogs.—H. K. Starkweather, of Northampton, states in the Massachusetts Plowman, that he killed three hogs, 17 months old, whose dressed weight were 410, 468, 570 lbs. The lightest one had a litter of pigs in August. Another hog of the same litter as the above, was killed in December, and weighed 450 lbs. They were a cross of the Mackay stock, derived from P. Lathrop, Esq., of South Hadley. Mr. S. attributes their superiority to the Mackay stock—says he took "far less pains than usual in fattening them," and that his old stock could seldom be brought, with any feeding, to the weight of 400 lbs.

Enormous Profits of Farming.—A correspondent of the Boston Cultivator, states the success of a man who left a lucrative business in the city of Philadelphia, for farming, to make a *profit*. After two years trial, he was asked if he did not find the profits small, compared with those of trade? He answered, "Quite the contrary; *I have already realized far more than the most* I had dared to anticipate, *and am, at the end of two years, richer than I ever could have become by twenty-five years of successful trade.* It is true I made more dollars and cents in trade than I do now, but that is *dross*, compared to the blessings of health of body, and peace of mind, which gold and silver could never purchase. I eat, drink, and sleep, with an appetite; yawn at bed time, and never in the morning; am up before the sun, and yet the day is never too long; and more than all, I have no acceptances to take up. Money! why what use have I for it? I raise my own food in the richest profusion, and my own clothing —my estate is annually increasing in value—then what is the use of money? I can't eat it or drink it, even if it were cut into mince meat."

Good Roads.—Lord Bacon regarded successful gardening as the last touch of civilization—" when nations grow to civility and elegancy, men come to build stately sooner than to garden finely"—but we slightly differ from him—*good roads*, it strikes us, are about the ultimatum. The rich, fertile, very narrow valleys in Hamilton county in this state, can never be valuable, because there is not land enough to warrant the working of good roads. Nearness to market—to say nothing of nearness to meeting—is worth a great deal to a farmer. Ten miles, through deep mud, in five hours with half a load, is quite a different thing from ten miles in two hours, over a fine smooth road, with full weight. What is the reason that farmers give so little attention to the improvement of their roads? The same deep mud-hole is plowed into by one hundred different teams for months together, when a few loads of gravel would make it fine. Or the same steep hill is ascended and descended fifty to five hundred times a year each, by a hundred different farmers, which a new road passing round the hill would wholly avoid. Farmers seem to be waiting for *plank-roads* to *grow*—and a friend has even suggested the plan of trying to procure some of the *seed* to sow along the rich bed of mud which connects all our towns and villages. We think, however, that even the laborious industry of the ancient Peruvians would be preferable—where, according to Prescott, roads of more than a thousand miles in length were made of huge flag-stones, connected by bituminous cement, the remains of which still exist.

Fecundity of Bees.—The number of bees in one hive, of strong stock, produced from spring to midsummer, is estimated at 20,000 to 30,000.

Long Tunnel.—A tunnel is now in construction 2¼ miles long, directly under the city of Liverpool, to connect the great railroad back of the town with the shipping in front of it. Many of the finest buildings will be only 50 feet above the roll of the locomotives.

Sewage Manure.—The report of the sanitary condition of the city of Sheffield, England, shows that the fertilizing substances carried off in the sewers of that town, which contains 110,000 inhabitants, is equal, annually, to the enriching power of 3,140 tons of guano, in value £30,000, or $140,000.

Merry's Museum.—This well known and popular journal for youth, is now published by G. W. & S. O. Post, New-York, at $1 a year. It is edited by S. G. Goodrich, author of Peter Parley's Tales.

Keeping Dried Fruits.—A correspondent wishes information in regard to preserving apples and other dried fruits through the summer season so that they will not become " wormy." Will some one tell us?

A good rule in awarding premiums.—In awarding premiums on cows and heifers, for the Essex county (Mass.) Agricultural Society, the committee say they have made it their aim to "reward the care and skill of the owners of cows and heifers, in training and keeping them in the best and most economical manner, rather than to reward *good fortune* in finding and purchasing those already trained and expensively fed by others. For this reason, where there were two animals equally balanced as to merit, the one purchased and the other raised and trained by the claimant himself, they thought it their duty to give the preference to the latter."

De Ruyter Farmers' and Mechanics' Association.—We learn that an association with the above title, has been formed at De Ruyter, Madison county, N. Y. Its object is the advancement of knowledge relating to agriculture, manufactures and arts. The officers are a president, three vice-presidents, librarian and treasurer. The association meets for four months in the year, (during the winter,) once in two weeks, and once a month for the remainder of the time. At those meetings, discussions are held on various subjects, and each person gives his own views and practice. We learn from the president, Hon. Benj. Enos, that a Library, consisting of the most approved works on agriculture and the arts, has already been commenced, and that it is intended to increase it by annual additions. Provision has also been made for the delivery of Scientific lectures before the association.

Another great benefit which will accrue from this combination of intellect and effort, will be the production of essays and articles on subjects connected with the business in which the members are engaged. Thus one person may take up a particular branch of agriculture—the cultivation of fruit or Indian corn or wheat, or the management of any kind of live stock—another person some department of manufactures or arts and show the whole philosophy, and the practical bearings and operations which are involved. Such papers would be highly interesting, and coming mostly from practical men, would receive attention.

We would suggest the adoption of the same system by Farmers' clubs, and similar associations.

The last Smithfield Cattle-Show.—As a matter of interest to many persons in this country, it may be well to preserve a record of the decisions made at the last show of the celebrated Smithfield Club, which took place in London from the 8th to the 12th of December last. There were one hundred and twelve fat cattle exhibited. This is a less number than has been brought out at some former shows, but the general quality of those presented on this occasion, was acknowledged to be superior to those of any previous exhibition. The prizes were more scattered among the various breeds, than they have generally been heretofore. In the six first classes, embracing oxen and steers, and containing twelve prizes, the Devons carried six, the Short Horns three, the Herefords two, and West-Highland one. In cows and heifers there were three classes, embracing seven prizes, of which the Short Horns carried three, mixed Hereford and Long-Horn one, Hereford one, mixed Hereford and Short-Horn one, and Long-Horn one. The Gold medal for the best ox or steer, was awarded to a Short Horn, and the Gold Medal for the best cow or heifer to a mixed Hereford and Long-Horn. The great contest among the oxen and steers appeared, to be between the Short-Horn ox of Mr. Manning, and the Hereford of Mr. Taylor. Both animals were four years old, and of a quality which it is said, "were never exceeded." The gold medal was finally awarded to the Short-Horn; though the decision of the judges has been somewhat controverted.

Apples in Alabama.—The Alabama Planter states that during the past summer the Mobile market was well supplied with apples, the growth of the immediate vicinity. Among them were "large greening pippins, [Newton] and russets of the Northern States. The first grew remarkably large." Trees brought from the north attain a large size in five or six years; and the standard winter apples of Massachusetts ripen by the end of the summer months. This early maturity and their large size, so alter the character of these fruits, that they would scarcely be identified with those of northern growth.

STATE OF THE MARKETS.

New-York, Feb. 18, 1848.

The latest foreign news has had but little effect on the Flour and Grain market. Genesee flour is firm at $6.25 *a* $6.37½—Ohio and Michigan, $6,12½. Genesee wheat is worth $1.35*a*$1,36—Corn, 55*a*57c—Rye, 90c—Oats, 40*a*42c—Barley, 80*a*85c. In provisions there is not much doing. Mess beef is worth $9 per barrel, and mess pork $9.75. Goshen butter, 20*a*22c. per lb.—western, 16*a*18c.; and Ohio, 12½. Cheese 6½*a*7c per lb—Cotton, New Orleans and Alabama, per lb., 7*a*9¾c.—Upland and Florida, 7*a*8¾c. Wool is rather dull at about the same quotations as last month.

AGRICULTURAL IMPLEMENTS AND SEEDS.

Ruggles, Nourse & Mason,

Inventors & Manufacturers of the genuine Eagle Plows.

TO their extensive assortment of Plows they have recently added new patterns, embracing many important improvements, in form, construction and fixtures, which adapt them to both shoal and deep plowing. The peculiar form of the mould-board to take up the furrow slice and turn it over in the most perfect manner, with the least power of draft, leaving the soil in the best possible condition for after cultivation, and production of crops. The acknowledged strength and durability of the castings, the uniform construction and superior finish of the wood by machinery, are among the characteristics of their Plows.

At the most full, perfect trial and investigation of plows ever had in this country, held at Essex, county Mass., the Judging Committee, in speaking of the Improved Eagle Plow, to which they unanimously awarded the highest premium, say:—"As near as we can ascertain, this Plow combines all the good qualities manifested in either of the others, with some peculiar to itself;" and further, "our attention was called to the *quality* of the castings on the Plows of Ruggles & Co, their *finish* and *durability*. Their appearance is certainly more perfect than any thing we have elsewhere seen." "The process of Chilling the Point, the entire Edge of the Share and Flange or Base of the Landside. gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying that the value of the parts thus made is more than doubled by the process."

The following is a copy of their table showing the comparative amount of power in pounds, required to operate the different plows.

Medium Size Plows.

Winslows's	of Danvers,	462 lbs.
Ruggles & Co.,	of Worcester,	412 "
Prouty & Co.,	of Boston.	425 "
Howard,	of Hingham,	412 "

Large Size Plows.

Winslow	of Danvers,	512 lbs.
Ruggles & Co., Eagle,	of Worcester,	425 "
Prouty & Co., Sod A	of Boston,	427 "
Howard,	of Hingham,	450 "

In 1846, the first premiums were awarded to competitors who used Plows made by Ruggles, Nourse and Mason, at Plowing matches in the following named counties, to wit: Essex, Middlesex, Worcester, Hampshire and Berkshire, in Mass.; Orleans and Windham, Vt.; Kennebec, Me.; Litchfield and Hartford, Conn.; Prince George's and Montgomery counties, Md.

At the Cattle Shows held in 1847, the following premiums were won by Plowmen with Plows manufactured by Ruggles, Nourse & Mason.

ESSEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 25.
" "	2d Premium,	"	Eagle Sward B.
" "	3d Premium,	"	Eagle No. 25.
Horse Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 2
" "	3d Premium,	"	Eagle No. 2.
Subbsoiling,	1st Premium,	"	Eagle S. S. No. 1.

MIDDLESEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Doule Team,	1st Premium,	"	Eagle No 20.
" "	2d Premium,	"	Eagle No. 20.
" "	4th Premium,	"	Eagle No 25.
Horse Team,	1st Premium,	"	Eagle No. 2.

BRISTOL COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Sward C.
" "	2d Premium,	"	Eagle No. 2.
" "	4th Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 20.

BARNSTABLE COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Horse Team,	1st Premium,	"	Self Sh'ng No. 3.

HAMPDEN COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 1.
" "	6th Premium,	"	Eagle No. 2.

BERKSHIRE COUNTY, MASS.

1st Premium, and 7 others, Plows, Eagle Nos. 1 and 2.
1st Premium for the best Plows.

HAMPSHIRE COUNTY, MASS.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	7th Premium,	"	Eagle No. 2.
	8th Premium,	"	Eagle No. 2.

MERRIMACK COUNTY, N. H.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	2d Premium,	"	Eagle No. 20.
	3d Premium,	"	Eagle No 2.

WASHINGTON COUNTY, VT.

1st Premium, Plow, Eagle No. 2.

HARTFORD COUNTY, CONN.

1st Premium,	Plow,	Eagle No. 25.
2d Premium,	"	Eagle No. 2.
3d Premium,	"	Sward D.

ROCHESTER, MONROE COUNTY, N. Y.

Horse Team, only used	1st Premium,	Plow,	Sward C.
	2d Premium,	"	Eagle No. 25.

MONTGOMERY COUNTY, MD.

1st Premium for 3 horse size, Eagle No. 25.
1st Premium " 1 " " Self Sharpener No. 1.

They have also constructed a series of new patterns of plows of various sizes and forms, (some with wrought mould plates, shares, or points,) expressly calculated for the different *kinds* and *methods* of cultivation practiced in the Southern States, and which embrace all the alterations which a long and thorough investigation, and more extended acquaintance with southern culture has suggested, to render them peculiarly adapted to the wants of the planters.

Their stock of Garden and Field *Seeds* are raised especially for their trade, by most reliable and experienced growers, and are warranted fresh, and true to their names.

Their prices being *uniform*, purchasers can rely on having all orders executed on as favorable terms, and promptly as though they were personally present.

Dealers supplied on the most advantageous terms.

A supply of PLOWS and other articles from their establishment may be found at the stores of L. Tucker, Albany; A. B. Allen & Co., New-York city; R. L. Allen, New-Orleans; and at many other cities and principal towns throughout the country.

P. S. As it is impracticable here to give a detailed list of articles embraced in so great a variety, the proprietors propose to forward, (*gratis*) to persons requesting them, by mail or otherwise, descriptive catalogues of implements and seeds, of nearly 100 pages, embellished with cuts of tools, and embracing brief directions for sowing, planting and culture, rules for the application of Guano, Plaster and Bone Dust, with remarks on soils and plowing; and with general observations, list of agricultural and horticultural publications, &c. &c.

Worcester and Boston, Mass., March 1, 1848—3t.

OFFICE FOR PATENTS.

P. H. WATSON, Attorney and Solicitor of Patents, Washington, D. C., prepares specifications and drawings, and solicits letters patents for new inventions, in this country and in Europe; and transacts with promptness all business belonging to his profession, for which his charges are moderate.

Persons at a distance, by sending a model, or a pen and pencil sketch with a short description of an invention, by letter, may be informed whether it be patentable, and how the patent can be obtained, without the expense and inconvenience of a journey to Washington. Those who desire to send models, can do so with entire safety, by boxing them and forwarding them by any of the Expresses which run between this city and almost every part of the country.

He was at one period, for some years engaged in farming, and is also a practical machinest and millwright, and therefore. well qualified to judge of the utility and patentability of agricultural implements and machinery, as well as of improvements in the mechanic arts generally; and can readily understand the several parts of an invention from a rough drawing and description.

Those who may visit the city to make personal examinations of the models of patented inventions, records, &c., preparatory to applying for letters patent for their own inventions, would find it to their advantage to call upon him immediately upon their arrival, as he can furnish them with such information as will greatly facilitate the transaction of their business, and materially aid them in securing their rights.

Persons are frequently subjected to long and tedious delay and accumulated expenses, in obtaining patents, in consequence of having their papers and drawings imperfectly, or improperly prepared; and when obtained, after so much trouble and cost, the patent often fails to protect the invention, from the same causes which produced the delay. All these difficulties may be avoided by the employment of a competent and faithful agent residing at the *Seat of Government*, where he has daily access to the models and specifications of patented inventions, and other sources of information that do not exist elsewhere, which enables him to draw up specifications that will amply secure the just claims of the inventor, and at the same time avoid an interference with old inventions. By this means the rejection of an application is prevented, and a strong and valid patent secured.

For evidence of his competency and integrity, he would respectfully refer to all persons for whom he has transacted business.

Office on F street, between 7th and 8th streets, opposite the United States Patent Office. March 1, 1848—[illegible]

BLACK SEA SPRING WHEAT.

A SUPPLY of the above on hand at the Albany Agricultural Warehouse and Seed Store, Nos. 10 & 12 Green-St., Albany.

FRUIT TREES, *of Select Varieties,*

PROPAGATED from trees, whose genuineness or excellence has been proved by thorough examination of the fruit in bearing For sale at the nursery of the subscriber.

☞ Persons wishing to set out new Fruit Gardens or Orchards, will, if they wish, be furnished with a carefully assorted collection, either large or small, of apples, peaches, cherries, nectarines, apricots, strawberries, hardy grapes, &c., of the best standard varieties, which have been selected after several years careful personal examination, *from several hundred sorts in bearing.*

A fine select assortment of ornamental shrubs, brilliant hardy roses, herbaceous perennial plants, evergreens perfectly hardened for transplanting, &c.

Orders with remittances promptly executed, and trees packed in bundles so as to be sent with perfect safety by canal or railway. Catalogues furnished gratis to all applicants. All communications to be post-paid, and directed, J. J. THOMAS,

March 1—2t. Macedon, Wayne Co., N. Y.

ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D., 310 Broadway, New-York, till the 25th of April, and after that time to Croton Point, N. Y., will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well, and produce good fruit when planted in most of the northern, and all of the western, middle, and southern States.

New-York, March 1—2t.

FRUIT AND ORAMENTAL TREES.

THE subscribers respectfully solicit the attention of fruit growers and dealers in trees, to their large stock offered for sale the ensuing spring, consisting in part of

FORTY THOUSAND APPLE TREES

of the most esteemed varieties, from 4 to 8 feet high, at $12 to $20 per 100; and $100 to $150 per 1,000. 8,000 trees of the Northern Spy, (one of the very best and long keeping apples known,) 5 to 7 feet high, 37½ cts. each, or $25 per 100—3 to 5 feet high, 25 cents each, or $18 per 100. 1,000 trees of the Early Joe, (a new and delicious summer apple, ripens August and September,) strong yearling trees, 25 cents each. A few hundred trees of the Melon, a native apple of western New-York of the highest excellence—described in the Horticulturist of February, 1848—price 50 cts. each. A number of select varieties are worked on *Paradise* stocks, adapting them to small gardens. These are one year from bud, of vigorous growth.

TWENTY THOUSAND PEAR TREES

of various sizes, from 3 to 7 feet high, embracing upwards of 200 of the best varieties to be found. 6,000 of these are on quince stocks (mainly one year from the bud but very vigorous) just right for training as *Dwarfs*, *Espaliers* and *Pyramids*. A few hundred trees each of the Swan's Orange or Onondaga, and the Belle of Brussels, (two unrivalled large rare fruits,) also Oswego Beurre, mostly strong yearlings, at $1 each.

FIFTEEN THOUSAND CHERRY TREES

from 4 to 9 feet high, of the finest sorts, 5,000 of them being 2 years old from the bud, with fine heads. Price $25 to $40 per 100. A few hundred fine trees can be supplied, budded on the *Cerasus mahaleb*, forming dwarf trees adapted to garden culture.

TWELVE THOUSAND PEACH TREES,

vigorous and free from all diseases, of 25 best market sorts; at $12 to $18 per 100, and $100 to $150 per 1,000.

Also, a large stock of all other hardy fruits, as well as

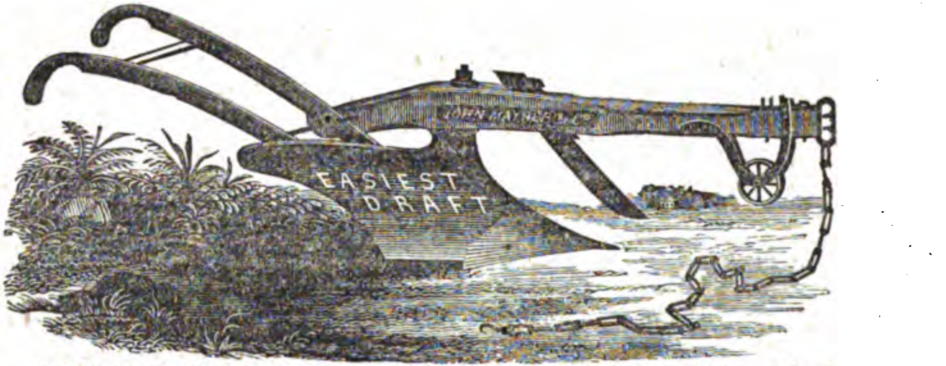
ORNAMENTAL TREES, SHRUBS, ROSES, &c., &c.,

at low rates by the quantity. The correctness of every article guarantied.

Orders promptly executed, and trees and plants packed for safe transmission to any part of the United States, Canada, or Europe. Priced descriptive catalogues of Nursery and Green House department, sent gratis to post-paid applications. Address

ELLWANGER & BARRY,
Mount Hope Garden and Nurseries, Rochester, N. Y.

March 1—1t



JOHN MAYHER & Co's.

Highest Premium Improved Eagle Plow,

Manufactured and sold at the United States Agricultural Warehouse, 195 *Front-St., N. Y.*

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to cut out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island October, 1847, whose able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the whole Union,) running in its natural course, and keeping in its true position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Sneaths, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER & Co.,
United States Ag. Warehouse, No. 195 Front-st., N. Y.

March 1, 1848—3t.

AGRICULTURAL AND GARDEN SEED WAREHOUSE.

RITCHIE & EADIE, 139½ Market-street, Newark, N. J., beg to announce to their friends and the public that they have on hand their spring assortment of Garden, Field and Flower Seeds, the greater part of which having been raised by themselves, they can with perfect confidence guarantee as pure and of good quality. Merchants and others who sell again will be supplied by the pound or bushel, or with boxes containing papers neatly closed and labelled, ready for retail on the most reasonable terms.

The subscribers have also constant communication with the best Nurseries in this country and Europe, and supply fruit and ornamental trees of every variety on the most favorable terms. Ladies and gentlemen will find this a good channel for obtaining any specified varieties of fruit or ornamental trees, shrubs, &c. They also supply all sorts of Agricultural Implements, Corn Shellers, Straw Cutters, Ploughs, Cultivators, &c. &c. of various qualities and the most approved constructions.

The subscribers are also agents for the Cultivator and Horticulturist. Catalogues furnished on application, if by letter post-paid.

Newark, N. J., March 1—1t. RITCHIE & EADIE.

FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and outhouses are new and convenient. A fine large orchard, embracing all kinds of choice fruit trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the west.

March 1—3t. A. H. NICHOLS.

A VIRGINIA FARM AND WATER POWER FOR SALE.

A BEAUTIFUL and highly productive Farm of 350 acres, on James River (west), of which a large proportion is low grounds, situated near Richmond. The canal running through it—well adapted to wheat, corn and tobacco. The situation is one of the most commanding and beautiful to be found; is healthy and well watered, and has a good market for all vegetables, meats, &c. There is a crop of wheat, new seeded. There are also two or three good water sites, with a plentiful supply of water for a factory of any kind; a most excellent dwelling, and all kinds of outhouses, such as barns, corn houses, negro quarters, overseer's house, stables, cow houses, threshing machine.

The property is now in excellent order, having just been all thoroughly done up and repaired; and the purchaser will not need any outlay after the first cost. It is well known, by actual survey, to possess valuable minerals, such as coal and iron. The whole will be sold very low, if application be made before the tenth of April next; and the purchaser can take, at his option, all the tools, stock, crop. And for particulars, apply to A. B. C. D.

Richmond P. O.; or to

March 1—2t. LUTHER TUCKER, Esq.,

Editor Cultivator.

OSAGE ORANGE, YELLOW LOCUST, AND BUCKTHORN SEED.

THE above, together with a general and complete assortment of fresh Field and Garden Seeds, for sale by

A. B. ALLEN & CO.,

Feb. 1, 1848—tf. 187 Water-st., New-York.

SEED SOWERS.

FOR sale at the Albany Ag. Warehouse, a large supply of EMERY'S SEED SOWERS, on hand, and being made for spring sale. The manufacturer has been awarded the N. Y. State Ag. Society's first premium. He also received the first premium at the Fair of the Mechanic's Association, held at Boston in September last. Feb. 1, 1848. H. L. EMERY.

NEW AGRICULTURAL WAREHOUSE.

SAMUEL C. HILLS, No 189 Water-st., New York, offers for sale Prouty's Plows and Horse Rakes, Wilkinson's Harrows, Corn Mills, Corn Shellers, Straw Cutters, Horse Powers, Churns, Grain Cradles, Scythes, Hoes, Rakes, &c., &c.

Patents secured upon moderate terms, and patent articles and rights bought and sold on commission.

New-York, Jan. 1, 1848—3t.

GRAPE VINES.

10,000 Isabella Grape Vines; **6,000** Catawba do.; **4,000** Aleaxander or Muscadel do.; of suitable age and size for forming Vineyards. **1,250** Catawba Vines, four years old, will produce fruit in 1848, suitable for gardens. For sale in large and small quantities on the best terms. Purchasers of vines from the subscriber will receive, free of charge, a practical treatise (just ready for the press) on the cultivation of American Grape Vines, and the manufacture of Wines, treating particularly of soil, location, planting of vines, manuring, training and pruning, illustrated with plates. Vines will be packed so as to be sent to any part of the world with safety. Letters of inquiry, *post paid*, promptly attended to. Apply to B. G. BOSWELL.

Feb. 1—2t. 230 Pine-st., Philadelphia.

15,000 Buckthorn Plants.

10,000 Osage Orange Plants.

Also, Buckthorn Seed by the pound or bushel. For sale by

Feb. 1. L. TUCKER, Ag. Warehouse.

TAR PAINT AND LIME.

TAR PAINT for sale at the Albany Gas Works: *A very cheap* article for covering barns, &c.

LIME for sale at the Albany Gas Works, *cheap*.

Oct. 1—6t.*

ENGLISH AND FRENCH GRASS SEEDS.

THE subscribers have just received from England and France, a superior lot of *fresh* Grass Seeds of various kinds. Among these are the Perennial and Italian Ray Grass, Sweet Vernal and Oat Grass, fine mixed Lawn Grass, White Clover and Lucerne, English Beans, Vetches, &c., &c. A. B. ALLEN & CO.,

Feb. 1, 1848—tf. 187 Water-st., New-York.

FRUIT AND ORNAMENTAL TREES, GRAPE-VINES, &c.

BLACK Hamburgh, White Muscat of Alexandria, Royal Muscadine or Golden Chasselas, Early White Sweet Water Grape Vines. strong plants, raised from single eyes in pots and shifted, roots two years old and abundance of them, stems one year old, 6 feet ripe wood, price $5 for 6—$9 per dozen: *Cash with the order*. Taken out of the pots, carefully packed, the roots with the balls of earth in moss, and forwarded from New-York as directed. Also, good one year old plants of the above and other foreign varieties, at $6 per dozen; and superior *Isabella* vines, 3 years old, for speedy bearing—$4 for six, and $7 per dozen: packed, &c. Also, other native varieties, and every description of *Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c*, including the newest and choicest varieties, for sale *at moderate prices*, at the *Ancient* and *Real Linnæan Botanic Garden and Nursery*, late of *William Prince*, deceased, Flushing, L. I., near New-York. Descriptive Catalogues gratis, on application *post-paid*.

Feb. 1, 1848—2t. WINTER & Co., Proprietors.

FINE BLOOD MERINO SHEEP FOR SALE.

THE subscriber being about to retire from the farming business, offers for sale his entire flock of Merino sheep, which have been bred with the greatest care from the best flocks in the country. Of these 75 are ewes now with lamb by a buck from the recent imported flock of John A. Taintor, Esq., of Hartford, Conn.; 25 bucks one year old last spring from the above ewes, sired by the Rambouillet buck Chancellor; and 50 lambs the increase of last year, sired by the Rambouillet buck Grandee, now owned by the Rev. L. G. Bingham, of this place. As to purity of blood, fineness and weight of fleece, and strength of constitution, they are excelled by no Merinos in the country. The buck purchased from the recent importation of Mr. Taintor will also be offered for sale. To those wishing to improve their sheep, or those wishing to start a good flock, the present offers a rare opportunity, as they will be sold without reserve. Communications addressed to the subscriber will receive immediate attention. THOS. D. CANFIELD.

Williston, Vt., Jan. 15, 1848—3t.

THE AMERICAN ARCHITECT.

Published Monthly, at $3 per annum—Single numbers 25 cents—by C. M. Saxton, 205 Broadway, N. Y.

THE object of this publication is to introduce ORIGINAL DESIGNS of *Country Seats*, adapted to the varied tastes and circumstances of an American population—from the elegant Villa to the simple Cottage and plain Farm-House; from Planters' Mansions to Village Domicils. In a word, every variety of Rural Residences will be embraced in order to meet the views of every person desiring a Country House. In respect to style, cost, arrangement, finish, &c., utility will never be sacrifieed: economy in the outlay, with an appropriate style, will always be kept in view. The requisite details, specifications, plans, and directions, with a careful and reliable estimate of the cost, will accompany each design. These are essential features of a *Practical Work*—and no labor will be spared in their preparation.

Of the diversity of human dwellings, whether marked by elegance, convenience, or utility, or by the want of them, none can compare in national importance and philosophical interest with the FARM HOUSE—the Homestead of our species.

The selection of designs by those about to build Country Residences, is commonly attended with embarrassment, and always with expense. When furnished by professional men from general ideas communicated by proprietors, they are seldom satisfactory. The AMERICAN ARCHITECT, by furnishing a collection of designs adapted to all tastes and means, will remove every difficulty in the choice, and save money expended on plans of no use. It will furnish 12 Elevations, Plans and Specifications in each year, at a price not exceeding one seventh of the usual charge for one.

"The price is only 25 cents for each number, and it is surely next to impossible but that such a periodical will obtain a wide circulation."—*N. Y. Tribune.*

"This work promises to supply a want which has long existed, and to be of essential value."—*Salem Register.*

"This work cannot fail to be useful and popular."—*Boston Bee.*

"This is a good and beautiful work, and well adapted to effect a much desired reform in Am. Architecture."—*Boston Trav.*

The *cost* of building from the plans given, will be from $600 to $5000, with complete specifications from a first rate Mason and Carpenter, and the prices given can be depended upon.

New-York, Jan. 1—3t.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200.000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5.000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15,000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. **THORP & SMITH.**

Syracuse, N. Y., Nov 1—6t.

N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATOES,

COMPRISING several sorts of Pinkeyes, Russets, Purples, Reds, Whites, Rareripes, Orange, and others not yet fully developed. All purely Seedling—the product of a careful and expensive experiment of six years with the seed from the balls and its Seedlings in alternate reciprocal culture *Reciprocal*, because in each rotation the seed improves the Seedlings, and the Seedlings the seed. By this method of culture these potatoes have acquired a *healthy* and *early* character, are *very productive* and of the *finest quality*. Having been for so many years in succession planted in April. (in their seed,) and early harvested, they have become *constitutionally* what they are, and with early planting, early digging, dry and airy storage, they will prove *sound* and *durable*—and the method continued, the development of new varieties and improvements will also continue.

Also, "N. S. SMITH'S NEW AND IMPROVED BUFFALO SEEDLING POTATO SEED." This seed was gathered in the balls last September from a four acre crop of Seedlings, from improved seed sown in April last. Six years' alternate reciprocal culture with its Seedlings, has given it an *early* and *very productive* character. It will produce Seedlings of the size of small birds, eggs as early as in May. Season favorable, with good culture, it will produce the first season sown, about 200 bushels per acre, a good proportion of marketable size, sufficiently mature for the table, and seed balls in abundance. Tubers of the weight of 12 oz. were quite common among the young Seedlings last fall, and on the roots of many single plants were found fully set and growing, hundreds of Seedlings, though when so numerous, mostly small. In addition, this seed is impregnated (by the pollen in the blows) with choice varieties, late from Germany, England, South America, Albany, Illinois, and home markets—mostly Seedlings, interspersed for that purpose in the field; and it will represent, when culivated, all the distinct varieties grown in that field, besides an amusing freak of mottling, tinting, and originality. The seed may be sown in April like tomatoes, in a warm bed. Bleached cotton cloth, tacked on frames for potato beds, is better than glass. The beds should be open to warm rains and to all warm weather. The same hands in a given time will transplant with the young plants more ground than can be planted with tubers. (*Particular* directions accompany the seed.) These potatoes and seed were represented at the two last State and County Agricultural Fairs, and the first premiums awarded them. The cultivation of these potatoes and their seed will be continued at Buffalo with every possible improvement. Seedlings of approved varieties carefully packed in chaff, and delivered at the wharf or depot in Buffalo, $5 per bushel—$10 per barrel. Transportation safe from frosts after February. Seed per paper—sufficient to produce 10 bushels—$1, with directions. It may be conveyed by mail with double postage. Orders and communications, post-paid, will receive prompt attention.

Buffalo, Jan. 13, 1848—3t. **N. S. SMITH.**

Extract from the Report of the Committee on Vegetables at the last New-York State Fair.

"The committee on vegetables have reported, that for the greatest and best varieties of Seedling potatoes of approved varieties, they award the premium of ten dollars ($10) to No. 73, presented by N. S. Smith, of Buffalo, N. Y. These potatoes were grown by the Rev. N. S. Smith, of Buffalo, who has favored us with the manner of their cultivation and production. He has been six years cultivating them from the balls that grow on top of the vines; his method is the alternate planting of the seed and tuber or potato, taking care to select always the best varieties. He has presented at the Fair as a specimen of his crop this season, thirty varieties of Seedlings, all of them evidently of fine quality. His specimens of this year's Seedlings, from the seed of his best Seedlings, are very fine. He presents, also, fine specimens of Seedlings from seed of Seedlings grown last year in Prussia, Germany, and fine varieties late from South America. Mr. Smith is confident, and the Judges favor the opinion, that in his experiments a great improvement in the potato is already accomplished; and he hopes to be able to obtain permanently, potatoes not only of the finest quality, but perfectly sound and hardy. The judges would recommend the attention of farmers to his specimens on the ground, and also to his mode of cultivation." Signed by David Gray, Chairman.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. **JAMES PLANT & Co.**

JUST PUBLISHED, AN ILLUSTRATED TREATISE ON

DOMESTIC ANIMALS,

Being a History and Description of the Horse, Mule, Cattle, Sheep, Swine, Poultry, and Farm Dogs.

WITH directions for their Management, Breeding, Crossing, Rearing, Feeding, and preparation for a profitable market. Also, their Diseases and Remedies, together with full directions for the Management of the Dairy, and the comparative economy and advantages of working animals, the Horse, Mule, Oxen, &c. By R. L. Allen, author of "Compend of American Agriculture," etc.

The above work contains more than FORTY ENGRAVINGS and PORTRAITS of improved animals, illustrative of the different breeds and various subjects treated in it.

The most minute as well as general principles for breeding, crossing, rearing, feeding, and management of all domestic animals, are herein given, to produce the utmost marketable value for the food and attention bestowed on them; as well as to prevent disease, and save the immense losses which annually occur from this source.

The diseases of animals are also fully treated, with their remedies, management, &c., &c. Published by C. M. Saxton, 205 Broadway, N. Y.

Price, 75 cents, elegantly bound in cloth.

New-York, Jan. 1, 1848.—3t.

MOUNT AIRY AGRICULTURAL INSTITUTE.

THE subscriber having rented the Mount Airy Farm, the late residence of James Gowen, Esq., with all its extensive and eligible appliances for the purposes of a *Farm School*, will remove his school, now the Duchess Agricultural Institute, of Duchess Co., N. Y., to the above place, where he will open for the summer term on the first Thursday of April next; after which it will be known as the Mount Airy Agricultural Institute.

The winter term will commence on the first Thursday of October. This farm, which is located on the Germantown road, 7 miles from Philadelphia, Pa, having been so long known as the model farm of the United States, the site being proverbially beautiful and healthful, a minute description is deemed unnecessary; suffice it to say, that it presents every inducement and desirable facility for the establishment and maintenance of an Experimental, Practical and Scientific Agricultural Institute.

The course of instruction will be such as to give the students every facility for acquiring a thorough knowledge of Scientific and Practical Agriculture, with the use of the best modern farm machinery and implements, together with a select farmer's library, including numerous Agricultural Periodicals. Instructions will also be given in all the collateral branches requisite to insure the great desideratum which it was the object of the founder and Principal to supply by an education commensurate with the exalted destinies of a landed interest.

Chemistry and the other Natural Sciences receive particular attention—lectures with full experimental illustrations being connected with each course. The Zoonic course will commence with the Horse, a perfect skeleton of which being provided for illustration.

The best facilities are also afforded, that those who desire may here acquire a Commercial Education, to the end that they may lay the foundation in youth of a future life that shall be agreeable, healthful and useful.

Fee for the year, $200, payable semi-annually in advance. This sum includes Tuition, Board, Washing, Fuel, and Lights. An extra charge of $12.00 per annum will be made for pupils not furnishing their own bedding and toilet furniture. The modern languages $10 each extra per term, as also drawing.

This Institution is under the patronage of the American Agricultural Institute, the Farmer's Club of the American Institute, and the Duchess Agricultural Society.

For further particulars address **JOHN WILKINSON,**
Principal of the Duchess Ag. Institute, Poughkeepsie, N., Y., and after the 20th of March at the Mount Airy Agricultural Institute, Philadelphia, Pa.

REFERENCES.

Jas. Gowen, Esq., Philad., Pa.,
Robert Ewing, Esq., "
Zebedee Cook, Esq., N. Y.,
Thos. McElrath, Esq., "
J. D. Williardon, Esq., N. Y.,
Rev. F. A. Farley, Brooklyn,
Sam'l Allen, Esq., N Y.,
G. A. Amaux, Esq.,
C. H. P. McLellan, Principal Po'keepsie Female Academy.
Geo. Vail, Esq., Troy, N. Y.
Benj. P. Johnson, Esq., Albany.
H. Weed, Esq., Newburgh, N.Y.
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M. J. Myers, pres't Merchant's Bank, Poughkeepsie,
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Wm. C. Gibbs, ex-goveror of Rhode Island, Newport, R I.,
Geo. W. Dobbin, Esq., Baltimore,
R. W. Crookshank, jr., St. John, NewBrunswick.

Feb. 1, 1848—2t.

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HIGHLAND NURSERIES, NEWBURGH, N. Y.

NOTICE—A. J. Downing having retired from the Nursery business, heretofore conducted at this place under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which those nurseries have had, but as the present stock is gradually drawn off Mr. Downing's grounds they will greatly enlarge the nurseries, and fully endeavor to meet the constantly increasing demand for trees grown here. A. SAUL & Co.

February 15th, 1847.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. Saul, who has been at the head of this department for the last eight years, and his accuracy and fidelity in the propagation of fruits, and general care of nurseries during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted. A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15th, 1847.

A. SAUL & Co. beg leave to inform the patrons of this establishment and the public in general, that their stock of

Fruit Trees for Spring Planting, 1848,

Comprises nearly all the choice and rare varieties of recent introduction, among which are a fine stock of the *True Peach Plum*, (Prune Peche,) and Dubois' Early Golden Apricot, as well as a large stock, and full assortment of all the leading standard varieties; all propagated from *tested* fruit trees, or the most correct sources, under the personal supervision of A. Saul.

Their stock of ornamental trees is unusually large, (for particulars see Cultivator for October and November, 1847. Also Shrubs, Roses, Vines, &c. &c.: and as they propose clearing a large portion off of Mr. D.'s grounds this spring, to their new grounds, (40 acres,) they will dispose of a large portion of it at reduced rates to nurserymen, or amateurs who want to plant largely for the embellishment of new places. Also a fine stock of

5,000 American Arbor Vitæ, for screens, $15 to $30 per 100.
10,000 Osage Orange plants for hedges, $12 per 1000.
20,000 Buckthorn plants for hedges, $8 per 1000.

Orders addressed as above, *postpaid*, will receive prompt attention, and all trees, plants, &c. will be carefully packed and shipped to any part of the Union. Catalogues gratis to postpaid applicants.

Highland Nurseries, Newburgh, Feb. 10th, 1848.—2t.

HOPE-TOWN OATS.

FIFTY bushels Hope-Town Oats, raised expressly for the Ag. Warehouse and Seed Store, from seed imported the past season by the proprietors. They are much earlier than the ordinary oats raised here, ripening when sown side by side some two weeks in advance—yield well, and the kernel is large and heavy. Price, $1 per bushel.

For sale at the Albany Ag. Warehouse, Nos. 10 & 12 Green-St., Albany.

EAGLE PLOWS.

A FULL and complete assortment of the celebrated Eagle Plows, from the manufactory of Messrs. Ruggles, Nourse and Mason, constantly on hand and for sale at *manufacturer's home prices at wholesale and retail.* For prices, descriptions, &c., &c., see Catalogue of Albany Ag. Warehouse, furnished gratis at the Store Nos. 10 & 12 Green-st., or by mail to post-paid applicants. March 1.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the Patent Office, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine, will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

A. R. HAIGHT.
Room No. 1, Sun Buildings. 128 Fulton-st., New-York.
March 1—5t*.

FRUIT SCIONS.

THE subscriber can furnish Scions cut from the celebrated "Northern Spy" Apple Trees for this season's grafting, at $1 per 100.

All orders per mail, with cash enclosed and postage paid, shall be attended to. They can be sent by Express or Mail to any region of country. Address me at Rochester, Monroe Co., N. Y.

JAMES H. WATTS.
March 1—1t*.

POUDRETTE.

THE LODI MANUFACTURING CO. offer for sale their New and Improved POUDRETTE, at the following reduced prices: One barrel, $2; three barrels, $5; and seven barrels and upwards at $1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels ($3 worth) will suffice per acre, and bring a good crop; the labor being less than one-half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B. Allen & Co, agents, No. 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t*.

TO BREEDERS OF FAST HORSES.

THE celebrated Stallion Colt "ANGLO-SAXON," will stand for the ensuing season, at the farm of *Josiah Crosby*, in North Andover, Mass. "Anglo-Saxon" was sired by the original Black Hawk, now owned by the Messrs. Hill, in Vermont. He will be four years old in July next. His color is a bright bay. He weighs a thousand pounds, and though not entirely broken to harness, has great speed and splendid action. He took the first premium at the last Fair of the Essex County Agricultural Society; and has been pronounced by amateurs a *perfect* animal. Like the rest of the "Black Hawks," he needs no encomium. Breeders are requested to examine and judge for themselves.

The "Lady Lawrence," a five years old chestnut mare, sired by Black Hawk, may be seen at the same stable. She can trot her mile in two minutes and forty seconds—has never been trained, and can be bought for $1000, if applied for immediately.

North Andover, March 1st, 1848.—2t*

A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in front; has sixteen apartments, including kitchens and cellars. A frame bank barn, with stone basement, 63 by 38 feet; the corner posts twenty-two feet six inches high. With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr. Samuel Lawrence of Lowell, Mass., or Messrs. Perkins and Brown of Springfield, Mass. For terms apply on the premises.

JOHN SMART.
February 7th, 1848.—3t.*

THE CULTIVATOR
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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

Vol. V. ALBANY, APRIL, 1848. No. 4.

THE FARM OF E. PHINNEY, ESQ.

Editors of the Cultivator—Having recently enjoyed the kindness and hospitality of this gentleman and his pleasant family, in a short visit to his beautiful and highly productive farm in Lexington, Mass., and having found much, very much, to admire and approve, I know of nothing which I can furnish for the columns of your excellent journal, that may be so useful and instructive, as an account of some of the practical operations of this intelligent, skilful, and long experienced farmer.

In a recent letter to me, Messrs. Editors, you were pleased to say,—" there is at present a large class of agricultural readers, who have gone to farming, from the shop, store, offices, &c., who read much more than the old stock, and who absolutely require all the details of farming." This fact, coming from so high authority, I regard as full of promise for the future improvement of our agriculture; since this class of readers, being free from *old* prejudices, will have their minds open to *truth*, even if that truth should be found lurking under the head of "modern improvements." To this class my present observations will be more particularly directed; and, avoiding all glowing descriptions of this beautiful farm, which might be very properly given by an abler pen, I shall content myself with the more humble, but I trust not the less useful detail of farm management.

When Mr. Phinney commenced, some twenty-five years ago, his farm presented a most forbidding aspect. The soil was covered up with stones and bushes, shrub oaks and pines, so as to be literally inaccessible for cultivation; the fences were in a miserable condition, and what land had been cultivated, was worn out in vegetable substance under the "skinning" system. He debated with himself, for some time, whether an investment might not be made here, in the removal of these obstructions and the improvement of the soil, that would be judicious, and in the end profitable; and although men of less agricultural skill and enterprise, would have shrunk from the undertaking, he commenced and persevered.. It must now be apparent to any practiced eye, that on this farm are the elements of liberal and sure reward for all former toil and expense, let the world go as it may.

It is almost incredible how much the hand of skill and diligence has done on this farm, in removing the obstacles to cultivation, and converting barren and unproductive wastes into fruitful fields. The secret, however, is clearly revealed in the following remarks, found in an address delivered by Mr. Phinney himself, before the "Middlesex Society of Husbandmen," several years since, which are so much more to the purpose than any thing I can offer, that I cannot forbear the quotation:—

"It is true, that the wealth of the opulent has done much, but mental research and a spirit of inquiry, accompanied by the personal inspection and persevering efforts of the practical farmer, have done much more to increase the produce and improve the condition of our farms.

"This is most forcibly illustrated by Pliny the elder: 'Furius Cresinus, an emancipated Roman slave, having obtained from his very small estate, much larger crops than his more wealthy neighbors from their vast domains, they became so envious, that they charged him with employing enchantment, to attract into his grounds the produce of their fields. Having been summoned by Spurius Albinus, and being fearful of condemnation, he introduced into the forum, as the tribes prepared to vote, his robust and well clad family, and his agricultural implements, his heavy mattocks, his ingeniously constructed plows, and his well fed oxen, and then exclaimed—Behold! Roman citizens, my magic; but I am still unable to show you, or to bring into the market place, my *studies*, my constant *vigilance*, my fatiguing *labors*. Scarcely had he concluded, when he was absolved by public acclamation.'"

"It is in enterprise, study, unremitting study, vigilance and industry, more than in *money*, that the mystery of great crops and successful husbandry consists."

Removing Stones and Bushes.—The task of removing the stones and the growth of shrub oaks, and other bushes, is immense, a ton's weight of the former being, on an average, generally taken off from 6 or 8 feet square of ground. In addition to innumerable stones of from ten to one or two hundred pounds weight, are larger ones, imbedded mostly in the soil, weighing several tons. These are taken out by digging away the earth around them and blasting; the object of the first blast being to open a seam, and then the second blast splits the whole mass into several pieces, and throws it out of its bed; the work being done generally in autumn or forepart of winter, when the stones may be loaded on to a boat or ox-sleds, and drawn to any place where they may be wanted.

Large quantities are laid up into massive walls, from 3 to 7 or 8 feet thick, and 5 to 7 feet high. The fences on this farm are already built for generations to come, with but trifling expense in occasional repairs. Hundreds of tons of these stones have been buried in ditches in the bog meadow and on the wet lands, for the purpose of draining.

Manufacture of Manure.—It will be readily conceived that a farmer of Mr. Phinney's skill employs every means the farm affords for making manure, the necessity and value of an abundant supply of which, to successful and profitable farming, he fully appreciates.

A stock of 60 to 70 head of cattle is stabled most of the time, night and day, in the winter, and the manure is thrown into cellars underneath, the bottoms of which are covered with peat mud, 2 or 3 feet deep, in order fully to absorb all the liquids from the manure. The floor upon which the cattle stand, is 4 or 5 inches higher than the passage behind, and the planks are just long enough for them to stand or lie down comfortably, which keeps them perfectly clean. Immediately behind them, is a trench, some 12 to 16 inches wide, and the thickness of a plank lower than the passage way, which, except in the very coldest weather, is filled with peat daily, in order to absorb the urine; and this and the solid excrements go into the cellar together, by which arrangement the compost is most perfectly intermingled.

The cellars at the time of my visit, were full to overflowing, and the workmen had commenced carting out their contents. While doing this, more peat-mud is added if thought advisable; the intention being to use two parts of this material to one of manure. The compost is laid up in square, compact heaps, well covered with peat or loam, and mostly used when a year old; it being deemed of importance that the gases shall be fully developed and absorbed by the peat before it is applied to the soil, whereby all evaporation or waste is prevented.

The pasturage is deficient for this large stock of cattle, the whole farm containing but 160 acres; and it is therefore necessary to feed them through the summer, mostly in the barn, and for this purpose, clover, corn, early rye, &c., are sown, to cut and feed green. The cattle have, however, a small pasture to range upon a few hours daily for exercise. The manure heap is increased greatly by this summer feeding, peat-mud being thrown into the trenches freely, every day.

Mr. Phinney had the misfortune to loose his house and extensive piggery last summer by fire, and he is not doing much just now in the way of breeding and rearing hogs. After the new house is finished, he will put up a new piggery, and resume this important department of his farming. He feels out of his element about these days, from being deprived of the valuable assistance, formerly rendered so cheerfully, by his friends the excellent Mackays and Suffolks, in manufacturing compost at the rate of eight to ten loads each, annually. As it is however, a stranger walking over the farm, wonders what is to be done with all that manure, as he encounters at every turn a huge pile of it. About a thousand loads are made annually on the farm, besides an occasional purchase in Boston, as for instance: 15 or 20 tons of refuse salt fish—of which he showed me a bill just received—which is mixed through the heaps. There are some thirty acres under the plow, annually, upon which this amount of manure is spread.

Field Cultivation.—The soil of this farm was, originally, a thin loam, resting upon a hard, gravelly subsoil. Mr. Phinney early became convinced of the importance of securing and preserving the vegetable matter of the inverted sod, in order to supply, as speedily as possible, that which was most wanting in his soil—vegetable substance. It was the universal practice among farmers, when he commenced, to plow, cross-plow and harrow their sod-lands, thus exposing the vegetable matter of the turf to the dissipating influence of sun and wind, and almost entirely losing its value. By this means a great part of the object of plowing was entirely subverted—what was the surface before plowing was brought to the surface again, and the lower stratum, which should, by one careful plowing, have been left on the surface to undergo the ameliorating and fertilizing action of the atmosphere, was returned to its lifeless and unfertile bed, receiving little or no benefit by the operation. Believing this to be an error in practice, he instituted an accurate experiment to ascertain the amount of purely vegetable matter in an acre of sward-land, of very moderate fertility. This experiment, although made some twenty years ago, is still possessed of so much interest, and detailed with so much accuracy, and is, withal, so perfect a specimen of what the details of farming, for the press, should be, that I give below his own account of it:—

"In May, 1829, the field having laid three years to grass, and the crop of hay so light as to be worth not more than the expense of making, with a view of ascertaining the quantity of vegetable matter upon the surface, I took a single foot square of green sward, and after separating the roots and tops of the grasses from the loam and vegetable mould, it was found, on weighing, to contain nine ounces of clear vegetable substance, giving, at that rate, over twelve and a quarter tons to the acre. This convinced me of the importance of taking some course by which this valuable treasure might be turned to good account. That a great part of this mass of vegetable matter is exposed to useless waste, by the usual mode of plowing, cross-plowing, and harrowing, must be obvious to any one. In order, therefore, to secure this, as well as the light vegetable mould at and near the surface, which is liable to waste from the same causes, I had two acres of the green-sward of this field turned over with the plow as smoothly as possible. After removing the out-side furrow slices into the centre of the plow-land, and thereby effecting the double purpose of covering the vacant space in the middle, and preventing ridges at the sides and ends, the field was rolled hard, with a loaded roller, by which the uneven parts of the furrow were pressed down and the whole made smooth. It was then harrowed lengthwise the furrows, with a horse harrow, but so lightly as not to disturb the sod. Twenty cart loads of compost manure, made by mixing two parts of peat-mud, with one of stable dung, were then spread on each acre. It was then harrowed again, as before, and the poorer part of the soil, which had been turned up, and remained upon the surface, was thereby mixed with the compost manure. Corn was then planted in drills upon the furrow, the rows being at the usual distance, and parallel with the furrows. At hoeing time the surface was stirred by running a light plow between the rows, but not so deep, at this or the subsequent hoeing, as to disturb the sod. What Mr. Lorain calls the 'savage practice' of hilling up the corn, was cautiously avoided.

"As the season advanced, I carefully watched the progress of my corn-field. In the early part of the season it did not exhibit a very promising appearance; but as soon as the roots had extended into the enriching matter beneath, and began to expand in the decomposing sward, which had now become mellow, and more minutely divided by the fermentation of the confined vegetable substances beneath, than it possibly could have been by plow or hoe, the growth became vigorous, and the crop, in the opinion of those who examined the field, not less than seventy bushels of corn to the acre. As soon as the corn was harvested, the stubble was loosened up by running a light horse plow lengthwise, through the rows, the surface then smoothed with a bush-harrow, and one bushel of rye, with a sufficient quantity of herd's-grass and red-top seed, to the acre, was then sowed, the ground again harrowed and rolled. The crop of rye was harvested in July following, and the two acres yielded sixty-nine and a half bushels of excellent grain, and over five tons of straw. The grass seed, sowed with the rye, took well, and the present season I mowed, what those who secured the crop, judged to be two and a half tons of the very best of hay from each acre.

"Thus, with one plowing, with the aid of twenty cart-loads of compost manure to the acre, I have obtained two crops of grain, and stocked the land down to grass."

Ever since that experiment, it has been his invariable practice, to plow but once during a rotation of crops. The turf is carefully inverted and there remains, through the whole rotation; the subsoil, or what was before the lower stratum, remaining on top, is ameliorated and enriched by the action of the atmosphere, and the compost spread upon it. The poorer soil below has been gradually brought up, by deepening the furrow an inch or two at each sod-plowing, and I noticed that now, especially on fields that have been for several years under his liberal hand, the soil is deep and rich.

My attention was directed to a field of 12 acres, which he took in hand a few years since, an old orchard, which had been in grass for a long time, the soil thin, and the field covered with stone-heaps. These were removed, the field plowed about six inches deep, and the stones brought to the surface in the operation, picked up and carted off; thirty loads of compost to the acre were then spread on top and harrowed in, and the field planted to corn. The crop averaged between seventy and eighty bushels per acre, and the next spring the surface was loosened and leveled with the harrow; a compost of 6 bushels of lime to 3 loads, or 1½ cord, of peat-mud was spread, 12 loads per acre, and the field sowed to wheat. The yield averaged 20 bushels to the acre, of fine quality. At the same time it was stocked to grass with ½ bushel herd's-grass, 1 bushel red-top, and 10 lbs. clover seed, per acre. The seed took well, and the next year the job of making and securing the hay was let out, and judged by those to whom it was referred, to be 40 tons, when in the barn. The grass crop has been heavy on this lot for 5 or 6 years since.

This liberal use of grass-seeds has several advantages to recommend it to a more general practice among farmers. The soil is completely filled with the kind of vegetation wanted; and hence the quality of the hay is much finer, and rendered free from foul stuff, and a thicker and more valuable turf supplied with which to enrich the ground, when again broken up. I particularly noticed that the grass grounds on this farm were remarkably free from those vacant spots, and those large tufts of grass, which are so frequently seen on land seeded to grass by the hand of parsimony. The quality of the hay in the barn, also attracted my notice, as being excellent. If the poor soil and thinly set sward of 1829, had 12¼ tons of vegetable substance to the acre, the same field, in its present improved condition, probably has a sward containing 20 to 25 tons of this material, per acre—which, turned under for the support of the growing crops of the next rotation, is an item of no small importance.

We see, in connection with the foregoing remarks on Field Cultivation, why it is that farmers who have mainly to do with worn and hungry soils, of a sandy or gravelly nature, insist so strenuously upon the great value of a compost of two parts of peat-mud or swamp-muck, to one of stable-dung; considering it equal in its effects, load for load, to animal manure alone, in a rotation of crops. The fact is, that light, thin, sandy and gravelly soils, are particularly wanting in vegetable substance; and their nature is also such, that it is impossible any way can be fixed, to apply clear unfermented dung, without its being liable to great waste from the powerful operation of the sun's rays in evaporating the volatile portions of the manure, through the coarse, loose and open pores of the soil. But in resorting to the muck-hole, these farmers find the very material for the basis of the manure-heap, which their soils need, and by using it freely in compost with the manure of farm-stock, they are enabled to supply speedily and in large quantities, this vegetable substance. The compost being fully ripened, the gases all developed and absorbed by the muck, in the form of salts, we have a mass of vegetable matter to apply to these hungry soils, not so liable to the objection of loss by evaporation.

The skilful farmer also finds that his sandy or gravelly soil is generally too shallow, and he wishes to remedy the defect. He therefore, like Mr. Phinney, plows a little deeper at each breaking up, and the poor and lifeless soil, brought to the surface, is mixed thoroughly with the compost-dressing, and this, together with the action of the atmosphere, enriches and improves it. The vegetable matter of the sward is buried underneath, and thus a deep and fertile bed is formed, upon which the growing crops of the rotation may expand, and find nourishment to mature into a bountiful harvest.

The texture of these soils, as I have before said, is too loose and open, and this defect is greatly obviated by a few years tillage with the use of this compost; rendering the soil thereby more close and compact. In my opinion, such soils should always be manured with compost in some form. If the farmer has not muck at command, he may use clay, or a fine-grained, compact loam in its place, to excellent advantage: as by this means the texture of the soil is improved, and made more retentive both of moisture and manure. In short, it may truly be said, that there is no system of manuring, in field cultivation, of such *permanent* utility as a judicious mixture of soils.

I am not much given to *theory*, Messrs. Editors, although in the three paragrphs above I have indulged in it somewhat. You will please take it for what it is worth, and no more. The *practice* noticed in these remarks I believe to be correct, however wild the *theory* may appear.

In my next communication, I propose to notice:—

1st. Draining and reclaiming swamps and wet land.

2d. The fine orchards and their cultivation.

3d. Breeding and fattening swine.

4th. The imported stock of the "Massachusetts Society for promoting Agriculture," which is kept on this farm, and their treatment; with some reflections upon the subject. F. HOLBROOK.

Brattleboro, Vt., Jan. 28, 1848.

LANDS ON THE CANADA LINE.—Ex-Governor HILL, of New Hampshire, speaking of a trip he made along the Canada line, between Lower Canada and Vermont and New Hampshire, thus expresses himself:—"I was surprised at the extent and value of this whole country for farming purposes. I believe the belt of country for 100 miles south of 45th degree, and eastward of Lake Champlain, over Vermont and New Hampshire, through the whole extent of Maine to the Bay of Fundy and the sea, to be the most valuable tract of land in New England. The Canada townships, of ten miles square, farther north, are splendid. Stanstead may be taken as a sample. The best township of Vermont is said to be Derby, lying by the side of it. The cattle, and all the productions of these two towns are on a larger scale than we find down south."

IMPROVEMENT OF LAND IN BARNSTABLE.—Charles Sears, of Yarmouth, paid in 1832, for his thirty acre farm, $350, then thought to be its full value. Its total product then, was pasturage for two cows, and 25 bushels grain. Now he pastures three cows, gets 10 tons of good hay, 200 bushels of grain, 100 bushels potatoes, &c. He has a cornfield of 4 acres, yielding 40 bushels per acre. Most is sand, a small part sand and peat—on a part of the latter, reclaimed, he cut the past season at the first mowing, at the rate of 4 tons of hay per acre.

SCOTCH AND AMERICAN PLOWS.

Eds. Cultivator—The annexed remarks were written some time since, but were not thought by me of sufficient general interest to publish. Possibly you may judge otherwise. As a practical comment, it may be well to mention that I had a quarter of an acre plowed at our last cattle show, with the plow in question. The work was well done, within the hour, about an inch deeper, and an inch or two narrower than the requisition. The plowman, however, received no premium, which I took to be an indication that the ribbed and angular furrows did not please our farmers as well as the flatter and smoother appearance of the work done by our Worcester and other plows. W.

Lenox, February 14, 1848.

Many of your readers will have been struck with the extreme beauty and apparent completeness of the Scotch plow, as accurately delineated in "Stephen's Book of the Farm;" moreover they may have read such statements in regard to the perfection of English plowing as those made by Mr. Colman, who says, speaking of an English plowing match—" I do not misstate when I say, that I do not believe there was a variation of an inch in the whole field, in the width or depth of the furrow, or a single crooked line, or even one solitary balk;" and it may be interesting to them to know of some practical use of these celebrated plows in this country. No doubt there may be many of them in the country, but I have never seen any save one imported by me, nor have I seen any good account of them in our agricultural journals. I will, therefore, proceed to relate my own experience, and speak of its comparative advantages and disadvantages with reference to our American plows.

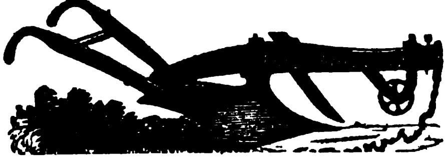


Fig. 30.—*American Plow.*

The accompanying sketches have been made in order to give, at a glance, the comparative proportions and size of each kind of plow. Fig. 30 being the usual form of the American plow as made by the best makers; fig. 31, the Scotch Iron plow; fig. 32, the Scotch plow, showing the underside, or portion that runs on the bottom of the furrow; and fig. 33, the corresponding portion of the American plow.

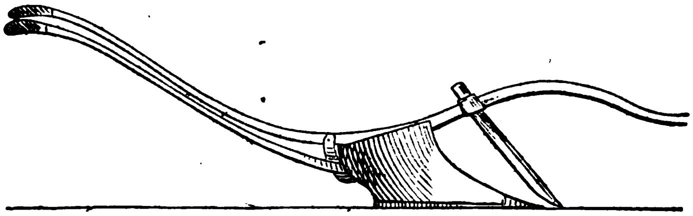


Fig. 31.—*Scotch Plow.*

It will be seen at once that these plows are constructed and must work on different principles; and before speaking of the action of the two instruments, allow me to show, in a few words, what are the principal points of difference.

1. The Iron plow is longer in every part, but chiefly in the handles, which are more than five feet, *horizontal measure*, in length from the mould board, whilst our plows are only about eighteen inches. The beam, on the contrary, is but little longer than ours. The landside, from heel to point, is about six inches longer, and the mould board to the extremity of the ear is also longer and more twisted.

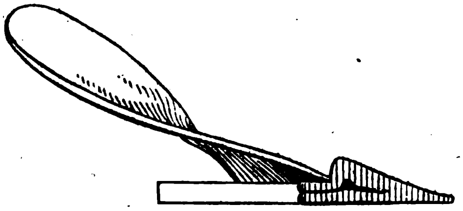


Fig. 32.—*Underside of Scotch Plow.*

2. The wing of the share, which is usually 10 inches wide in the American plow, is not over 6 inches in the Iron one. Consequently the latter does not cut the furrow much more than half off on the underside; but on the other hand it encounters fewer obstacles likely to disturb its motion, and avoids the friction occasioned by the cutting edge, both against itself, and against the landside.

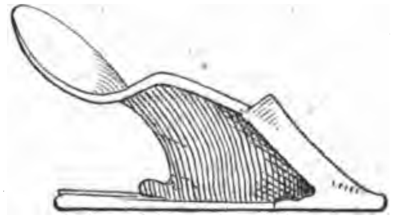


Fig. 33.—*Underside of American Plow.*

3. Owing to the above peculiarities, the plow moves so steadily that the coulter may be let down to the bottom of the furrow, thus cutting the slice completely off on the landside. In our plows the coulter cannot usually be let down without causing the plow to throw out.

4. The elevated beam of the Iron plow prevents all possibility of clogging.

5. The American plow has much iron cut away both from the mould board and the landside, whilst the other is whole on both sides. I believe the lessened weight is made up for in the increased friction where we plow over five inches.

6. The Iron plow rests all its weight on a shoe, say eighteen inches long by two and a half wide—the bottom of the mould-board does not touch the bottom of the furrow. In our plows the weight rests equally on the mould board and landside.

In a word, in the American plow the reversion is effected by causing the furrow slice to pass over the smallest possible surface of iron; and by keeping this in view the extreme of lightness is attained, sufficient strength, and the complete reversion of the furrow is effected. The plow weighing perhaps one-third of the iron plow, turns the same breadth and depth of furrow with a lighter team. But these admissions being made, and they are large ones, the palm of perfect work in every respect must be conceded to the admirable instrument we are considering. By its tapering form it enters the ground with ease, and moves with perfect steadiness, taking no notice of obstacles that would throw our short plow out of the ground. Its long and twisted mould-board raises the slice, pulverizes it completely, and leaves it in its place, with absolute regularity. The plowman, by means of its long handles, makes it move easily in a perfectly straight line, and the "work when done, resembles a ruffle just come from a crimping iron," as Mr. Colman describes it.

Taking for granted a superiority which two years trial has convinced me of, the question arises in what cases can an American farmer be justified in meeting the expense of first cost, say $20a$25, and of the additional force required to move it. For although two horses are in all cases sufficient, yet in a tough sward they must be much more powerful animals than our farmers usually employ. I should say then, that where the common system prevails, of going through a rotation of corn and potatoes, grain and grass, with only two plowings, and those only 4a5 inches deep, our farmers have, in the common plows, as efficacious an instrument as can be contrived. But on the contrary, whenever an improved agriculture is introduced, roots grown extensively; wherever, in a word, first-rate plowing is required, and thorough tillage, the Scottish plow, or some analogous instrument, must be used.

I have often thought whether some compromise might not be effected, whereby we might combine the perfection of the one with the lightness of the other; but I have not felt satisfied that it can be done. The slender shape of the Scotch plow requires that there should be great strength, and consequently, weight of wrought iron about it. Its parts are already adapted to move with the least possible friction that will effect the object; and although one of our plows does not present more than half as much surface of iron to the furrow slice, it is my belief that if it were loaded with the same weight of the other plow, it would be much heavier of draught.

MANURES—THEIR NATURE AND ACTION.

The subject of Manures, what they are?—what constitute their active principles?—how they act in promoting vegetable growth?—as well as the best mode of preparing and multiplying them, is one that has been frequently discussed—filled many pages in our agricultural journals—and occupied the attention of some of the strongest minds devoted to the study of agricultural science. These facts we may adduce as evidence that the right understanding of this subject is regarded as the foundation of all correct and profitable farming. Not only is this remark true when applied to our day—it was so two thousand years ago. We learn from Pliny that the Roman farmers decreed immortality to Sterculius for inventing manures, while they themselves devoted much of their attention to their preparation. To this end, the *mineral* as well as the animal and vegetable kingdom were called into requisition. The directions left on record for preparing their compost heap, selecting a shallow basin, and advising to cover the top, when completed, with *twigs and branches of trees with their foilage*, convince us that they were aware the *sun* and the rain would dissipate their active principles. The value they placed upon human ordure, and the liquid excrements of animals, the use of fish and other substances as manures, satisfies us that they possessed much of the practical skill for which the Belgians of the present day have been so justly celebrated.

When I commenced farming operations, I had given but little attention to the subject of manures, and regarded it as of comparatively little moment; but as I progressed, it has risen in importance, until it is with me the absorbing subject about which, although I have learned many things, I am more anxious to receive instruction than on any other topic connected with farming.

Manures may be said to be the elements of fertility, containing both the inorganic salts, and the organic elements of vegetable growth. In common language, they are the *food of plants*. How plants take up and digest this food—first requiring it to be dissolved in water, that by their open mouths at the termination of their roots they may drink it in—then conveying it in appropriate channels up through the trunk and branches, to be elaborated in the leaf, where it appropriates to itself the elements that enter into its structure, and give out to the atmosphere such as are not essential to its growth—is the interesting study of the vegetable physiologist. On this department of the vegetable kingdom it is not our purpose at present to remark—but rather to inquire what are the elementary substances that contribute most to the growth and fertility of plants? With these, we must not fail to be familiar, if we would be wise in the adaptation of means to the end, by which only can we expect success in this interesting department of human labor.

Chemistry teaches us that four elementary principles enter into vegetable structure, and hence are termed *organic* substances—they are *Carbon*, *Hydrogen*, *Oxygen*, and *Nitrogen*. The first three are furnished by the atmosphere in sufficient quantity to meet the demand of the growing plant—the remaining elementary principle, *Nitrogen*, that enters into every part of the vegetable structure, and hence may be regarded as essential to vegetable as it is to animal life; while it exists in the atmosphere, is not furnished in sufficient quantity for the perfection of vegetable growth. And if we would obtain vegetable products rich in nitrogenized principles, we must surround the growing plant with animal or vegetable manures containing an additional amount of these principles. In illustration of this position, we find wild plants to contain less of nitrogenized principles than cultivated ones—and as the value of all vegetable food for animals depends on the amount of these protein compounds, wild plants are decidedly less nutricious.

It would seem, then, that one of the great problems for the agriculturist to solve, is how to furnish plants with the requisite supply of Nitrogen with the least expense? And the question, too, for the skilful farmer is to learn in what substances he can find the most nitrogen, and how he can preserve it in the volatile form in which we find it in nature, to apply to the soil. The great number of substances used as manures would seem to render this subject extensive and complex.

In the suggestions I have to make, I shall endeavor to show that the amount of nutriment which each manure can furnish to the support of vegetable life, will be in exact ratio to the nitrogen which it contains,—in other words, that manures are valuable to the farmer in proportion to the nitrogen which they contain, or have the power of forming nitrates.

It has long been known by our practical farmers, that our most common manures possessed very different fertilizing properties, viz: the *Cow*, *Horse* and *Hog* manure, and human excrements. On what does this difference depend? We learn from chemical analysis, that the quantity of *salts* which they contain is very nearly the same in all, hence the inference is legitimate, that it does not depend on the salts—for if the salts were the source of their fertilizing properties, they would, contrary to the experience of practical men, be of equal value to the agriculturist. And so of the humic acid, or genine—for that is of equal quality in the horse and human excrements; but not so with the nitrogen, which exists in very different proportions.

The experiments made by the Prussian authorities, to ascertain whether the contents of the sewers, in the cities of Berlin and Dresden, could be applied with profit to the barren lands in their vicinities, are replete with instruction. Those experiments were made and continued through a series of years. The result satisfactorily demonstrated, that if a soil in its natural condition, without manure, would yield a crop of three to one, for the seed sown, it would with cow dung yield *seven*, with horse dung *ten*, and with human excrement *fourteen*. While analysis shows that this, their relative value, is just the relative proportion of nitrogen. Here then is science harmonizing with the experience of the practical farmer. While we can find science in the laboratory of the chemist, confirming, while it explains the experience of the practical husbandman, we are strengthened in following on in the pathway she would lead us. When science goes farther, and sheds her light where all before was darkness, we are rejoiced to follow reverently, if not confidingly, her teachings; but when those teachings conflict with what experience has demonstrated to be true, we should interrogate her farther before we venture to proceed.

Professor Johnston has told us, that the influence of ammonia on vegetation appears to be of a very powerful kind—it seems not only to promote the rapidity and luxuriance of vegetation, but to exert a powerful control over the functions of vegetable life. And again he says, the important influence which ammonia exercises over the growth of plants, is only to be explained on the supposition that numerous transformations of organic substances are effected in the interior of living vegetables, or a re-arrangement of the elements of which ammonia consists. Ammonia is a compound of *hydrogen* and *nitrogen*—and out of every 100 parts by weight of *ammonia*, we have 82⅓ of nitrogen. Ammonia is the form in which nitrogen is found in our manures, and is evolved as the product of the decomposition of animal and vegetable substances. If, then, this principle is the agent upon which fertility in the vegetable world mainly depends, as I have endeavored to show, we have a scale by which we may measure the relative value of manures, and by which our rules may be formed for the construction of our compost heaps, that will enable us to secure, with the least diminution, their active principles. Our senses will always discover to us the substances containing nitrogen from the tendency that characterises them to run into a state of putrefaction, and in the process of putrefaction to form alkalies; while other manures decay, without putrefying, and form acids instead of alkalies.

In the list of substances, valuable as manures, arranged according to their relative value, taking such a scale for our guide, we place first on the list those substances that have received the least care, and have been regarded by the generality of farmers as of the least practical value—I refer to the liquid excrement of *man* and *animals*.

In the composition of human urine, there does not enter a single salt which is not essentially an ingredient in all plants; its fertilizing property is found in the fact, that almost all the nitrogen that makes its escape from the body, makes its exit through the urine. That amount, in a full grown man or animal, is equal to the amount of nitrogen contained in the food on which the body is daily fed—and as nitrogen is the only substance that forms *muscle*, and meets the daily muscular expenditure of every working man and animal, (unless there be other sources of assimilation than those now known to physiologists,) that amount is not inconsiderable. The urine of the horse is but little less valuable than that of man—and that of the cow but little less than the horse. When we consider with what ease these may be saved by means of absorbing substances, that are within the reach of every farmer, how can we justify their shameful waste? Repeated trials of their use, have abundantly satisfied me, that the increased growth of the crop to which they have been applied, has abundantly compensated for the little labor bestowed in their collection.

Next on the scale, according to their relative value, we have the excrements of our domestic fowls. Since their food consists mainly of nitrogenized substances, and as we have in all the feathered tribe, the liquid and solid excrement combined, we may readily understand why to the prudent farmer, the poultry-yard renders such efficient aid in increasing his resources. Analogous in its composition and value is guano—the excrement of the sea fowl. To those in the interior of the country, that have not at their command this rich fertilizer, an admirable substitute is found in the dung of the domestic fowl. In confirmation of the position that it is the nitrogen that contributes more than any of the salts to the value of *guano*, we may remark, that analysis gives us in the best article from 8 to 9 per cent. of nitrogen, while in those that have disappointed the agriculturist in their use, not more than 1½ per cent. has been found.

Next follow *blood*, and animal matter—the carcases of our domestic animals—as horses, cows, hogs, sheep, dogs, and fish; with their coverings—the hides, hair, wool, feathers, hoofs, horns, and nails, &c. Substances rich in nitrogen should be made to impart to beds of peat and loam, the ammonia that escapes during putrefaction, instead of "wasting their sweetness on the desert air." And when they have done this, the wise farmer will see to it, that the bones that have constituted the frame work of the animals, be restored in some form to the soil, and thus be made to give back to it the phosphates that have been abstracted by the successive crops that it has yielded.

Next follow the droppings of the domestic animals. The resources of the farmer will be much increased by composting the *horse* and yard manure with peat, with which the careful farmer will see that his yard is well supplied. By this process, not only are the gases which are evolved during fermentation secured by the peat, as an absorbent, but the mineral substances, and salts which it contains, locked up as they are by superabounding acids, are set free, and neutral salts are formed, by which the peat itself becomes almost as valuable to the farmer as the dung itself with which it is composted.

Science and experience harmonize in their testimony that when compost heaps are made under sheds, their active principles are more certainly secured, being saved from the wasting process of leaching under rains on the one hand, and evaporation under exposure to the burning sun on the other.

Protection from the rains would seem to be necessary from the fact, that whatever there is in manure that contributes to vegetable growth, must be soluble in water, for plants take it up in no other condition than that of solution. And on the other hand, if there is a large quantity of vegetable matter in a dry state, to be composted, experience has taught us, it should be combined in some way with the liquid excrement of the animal, or else thrown into a compost heap immediately after a rain, when it is saturated with water. For such a requirement science furnishes us the following solution:—Ammonia, being a compound of *hydrogen* and nitrogen, water must be present in sufficient quantity to furnish the *hydrogen* to unite with the nitrogen, or instead of ammonia, we shall have cyanogen formed, which is also a compound of hydrogen and nitrogen; but the hydrogen is in a smaller quantity than what is requisite to form ammonia.

Among the artificial manures, peat may be used with great benefit, either alone, if exposed for a length of time to the ameliorating influences of the frost, rain, or atmosphere, or combined with the mineral manures, lime, pot-ash, or ashes. To the potato crop it may be used uncombined with mineral manures, not only to the increase of the quantity, but manifestly to the improvement of the quality—the abundant humus which it yields, contributing to increase the starch, upon which the mealiness of the potato, that we so much prize, depends.

The most satisfactory explanation of the action of gypsum as a manure, is that given us by Liebig—that it fixes the *ammonia* of the atmosphere for the benefit of the growing plant.

Charcoal, considered in itself, is one of the most indestructible substances—remaining unchanged, and apparently unchangeable in its form, for many years; and yet, from the increased fertility of the soil to which it has been applied, remaining long after the action of all other manures with which we are acquainted has ceased, and all traces of them has disappeared, it evidently possesses an influence on vegetable life as yet unexplained, unless it be its power of absorbing ammonia, and holding it in readiness to be given up to the growing plant, at every successive rain.

The importance which we thus attach to the influence and value of nitrogen in promoting vegetable growth, may, at the first glance, seem to war with the doctrine of special manures, as well as with the fact that a number of elementary inorganic substances, must always be present in the soil in sensible quantities; the absence of either one of which, without a doubt, will seriously affect vegetable growth. Such impression would seem to find support in the fact, that where in a particular field or section of country, from the growing of one crop a succession of years, instead of a system of rotation of crops, there has been an abstraction of one of these elements, the use of some manure containing a large quantity of that particular substance, will restore at once fertility to the soil, as was the case with the *grass* lands in *Cheshire*, in which the phosphates having been exhausted, *bone dust* proved more valuable than any other manure, and so of lime in other sections.

In such cases the action of the specific ingredient is only salutary, because in its use there is a restoration of a lacking element—the increased use of which instead of being salutary, often proves prejudicial to the interest of the farmer. To this fact we owe the expression, almost grown into a proverb, that lime, "while it enriches the father, impoverishes the son." Not so with nitrogen, or its compound ammonia—the more liberal its use, the greater the yield, and the better the tilth the soil acquires. The admission of the necessity for the presence of all the elementary inorganic substances in the soil, does not, in our judgment, at all invalidate the position which we have endeavored to sustain, that the value of manures in common use, may be measured by the quantity of nitrogen which they contain, or their power of forming nitrates.

Albany, March, 1848. J. M. Ward.

Facts and Opinions,

CONDENSED FROM BOOKS AND PAPERS.

Use of Clay on Sandy Soils—two Crops on the same Land at once.—The report of the committee on farms for the Hartford County Ag. Society, states that Mr. George Olmstead, of East Hartford, has greatly improved a piece of sandy land, which formerly produced very scanty crops, by mixing with it earth of a clayey nature. He is confident it has well paid him for the expense. The same report states that Mr. Olmstead has practiced cultivating two crops on the same ground at the same time, with advantage:—He plants, on early soil, potatoes in rows four feet apart; and after hoeing two or three times, he plants an early variety of corn between the rows. He believes that by this mode his ground yields him a much greater profit than when planted with but one crop.

Under-draining.—B. F. Jewett, near Utica, lays two scantlings in the bottom of his ditches, 5 or 6 inches apart, and covers them with a slab. In quicksand, a slab should also be laid on the bottom. The ditch is then filled with earth.

Browse for Sheep.—Hemlock, pine, and spruce, are found good for sheep. In new or wooded countries, much hay may be saved by the use of browse; and its succulence be useful and wholesome.

To destroy Sorrel.—Manure well early; plow deep early; harrow well; plant corn 3 or 4 feet each way; pass the cultivator through every ten days, till the middle of summer; then sow 12 lbs. of clover seed per acre, and pass the cultivator again. Clover will take the place of the sorrel.

Use of Railroads to Farmers.—Three thousand six hundred gallons of milk, daily average, were taken over the Fitchburgh railroad to the Boston market, the past season. In consequence of the increase of this business, a special milk train is to be run every night, after the commencement of the coming season.

Sheep killed by Dogs.—N. Sawyer writes in the Ohio Cultivator, that over 300 sheep have been killed by dogs on his farm since March last. More or less are killed every week. They are caught by the throat, a hole is torn into the side, and a part of the ham eaten off. The dogs never again return to the same sheep, but attack fresh ones. A part of the sheep on this farm are of great excellence and value, and have been brought over 1,000 miles. Is not the great State of Ohio, with its government, strong enough to protect the property of its citizens from such losses?

Rapid Growth.—It is stated in the Germantown (Ohio) Gazette, that there is, near that place, a willow tree, only about 20 years old, which is 10½ feet in circumference, (3 feet 4 inches in diameter) 64 feet high, and 64 feet broad.

Ohio Swine.—The Ohio Cultivator gives the number of hogs in each county in the State, according to census, for 1846 and 1847. In every one of the 83 counties the number has increased, except in two, viz: Champaign and Lawrence. In 1846, there were 1,405,621. In 1847, there were 1,751,318.

Prices of Farms.—The Village Record, published at West Chester, Pa., gives a statement of the sale of 13 farms in that vicinity; by which it appears that the prices varied from $33 to $87 per acre, and that the average price for the whole was about $58 per acre.

Cob Stove Wood.—P. Parks, of Victor, N. Y., states an interesting experiment in using cobs for fuel. Half his last year's fuel was cobs, from a few acres of corn. They burn quickly, and make a hot fire; an air-tight stove is best. A light tin shovel must be provided. Their ashes would doubtless be good for next crop.

WOOL-GROWING IN ILLINOIS.

Editors of the Cultivator—The extensive circulation of your well known paper, induces me, a western man, to offer a communication which I hope will contain information of some value to those wool-growers in the east who may think of emigrating to the west, with a view of following the same occupation to greater advantage.

The great extent of the west, its various climates, the different age of its innumerable settlements, the presence of destructive animals, and their extermination at certain points, are all circumstances that may favorably or unfavorably influence the efforts of the new settler. The descriptions of new countries are, for the most part, of too general a nature. They speak of the salubrity of the climate, the fertility of the soil, woods, prairies and rivers, and the whole is but an outline of a grand picture. There is a great want in these communications of that precise information required by men of business. Many emigrants have been disappointed for want of accurate information of the circumstances of the country, as bearing on their particular occupation. The failures frequently complained of, need not have occurred had the emigrants adapted themselves to the proper localities. To wool-growers, a correct knowledge of the very spot to which they intend removing, is all important, and absolutely necessary to secure them from many risks. But experience alone can point them out.

I have resided in this immediate neighborhood for twenty-nine years, and during the whole of that time have been a flock-master, owning from three hundred to eight hundred sheep. For twenty-five years of that time the great drawback to the pleasure and the profit of sheep-keeping, was the presence of the wolf. The injury did not only incur from the numbers of the animals destroyed, and they were very great; but from the necessity of keeping the sheep safely penned at night, summer as well as winter. This practice was highly injurious to the condition of sheep and lambs, as well as to the growth of wool and weight of fleece. But so long as the wolf existed in the country, there was no remedy. The wolf has left this part of the country for the past three years. The first year it was conjectural, for no one dared to leave his flock abroad. But for the last three years my flock, and other smaller flocks, have laid out safely in the prairie range from April to November, night and day. This circumstance forms a new era in sheep husbandry here, and opens a new field for capital and enterprise in that branch of business. Those who are conversant with sheep will allow, that every sheep suffered to repose in its own pasture, night and day, will pay its owner half a dollar a head more than one that is penned at night, especially where summers are long and warm as they are here.

The part of the country of which I am speaking, is in Edwards County, Illinois, a little south of Albion, the county town, in latitude 39. The easiest route to it from the east, is to descend the Ohio to Mt. Vernon, Indiana, thence to Harmony, 16 miles—from Harmony to Albion, 20. If Wabash boats are running, a passage may be taken at Cincinnati on one of them as far as Grayville on the Wabash, which is ten miles from Albion. The prairies of which I speak, lie between the Great and Little Wabash—10 miles from each, at an elevation of *one hundred and sixty* feet from both. Drained by these two rivers, the prairies between them are *rolling, high, and dry*. The soil is fertile, and takes grass well. The winters are short, and generally mild. Where there is an abundance of tame grass, sheep will get their living without much fodder, all through the winter. The cold weather that occasionally occurs in December, January and February, comes in short paroxysms, with long spells of intervening mild weather. Snow seldom lies more than three or four days together. A fall of six inches is a deep snow with us. Shelter is quite necessary for all domestic animals; for they, like man, feel more sensibly the cold spells of weather in our mild winters, than those inured to the severe and steady cold of a more northern winter.

The improvements made by the emigrant will be of a permanent or temporary nature, according to his capital and ultimate views. A shed with clap-board roof and faggot back, is all that is necessary for the sheep. A house of any description may be erected, from a snug log cabin to a mansion of brick, frame or stone. Abundance of materials being at hand, and workmen ready to erect them. The price of land is quite moderate. Choice situations for sheep-keeping may be found at from four to six dollars per acre. By choice situations, I mean those elevated and rolling situations in the clear prairie, that require no previous expenses but the fencing, to their immediate cultivation. A few grubs and hazel bushels, entail an expense of five dollars per acre, and heavy timber ten. The prairies are of moderate size, bounded by woodlands, and interspersed with clumps of full grown oaks, affording an agreeable shade to sheep and cattle, which is essential to their comfort and condition during the summer months.

The facilities we have of steamboat navigation, allow us to deliver our wool into any eastern manufactory at an expense not exceeding two and a half cents per pound.

Nothing can exceed the beauty of the park scenery of this country, its fertility, and generally inviting aspect. Neither must the emigrant think that he is leaving civilization and the comforts of life by coming here. The artificers of iron and wood are numerous and skilful in our small towns, making every tool and implement that the farmer needs. Well stocked stores supply our household wants. Churches and schools are well established. The whole United States cannot show a more peaceable, industrious, and contented population.

In the neighboring State of Indiana, common sheep may be bought for 75 cents or $1 per head. In this vicinity superior sheep of the finest wool, are from five to twenty dollars individually. But the chief object of this extended communication, was to give notice to my brother shepherds of the *absence of the Wolf*, a circumstance in itself that may give success, when his presence would assuredly entail a loss, or perhaps inflict a failure.

The astronomer who patiently watches a plane in the heavens for a quarter of a century, records perhaps the disappearance of a well known star, or the discovery of a new one. It is by recording these simple facts that the science of astronomy has so astonishingly and steadily advanced. If farmers would follow this safe example, and give *facts* instead of theories, agriculture would make a more steady advance, and the recorded communications of its journals would be received with greater reliance. George Flower.

Park House, near Albion, Edwards Co., Ill., Jan. 24, 1848.

Diseases of Animals, &c.

Disease in Swine.

I wish to inquire through the Cultivator, in regard to a disease in swine from which I have suffered loss. In September last, I noticed that one of a litter of ten pigs, which had been farrowed in March, (and which were of good size—would weigh from 150 to 200 lbs. each,) was attacked with what is called the thumps or heaves. In about 24 hours it died. In a few days another was attacked, and soon died, and they thus went off, one by one, till I lost nine out of the ten. I kept for my store hogs about a dozen pigs that came in September; and they are going in the same way. They die at the rate of about one a week. They never live more than 24 hours after I discover the first symptoms of the disease. As soon as one appears to be affected, I take it away from the rest. I have given sulphur and everything I could hear of that would be likely to help them, but all to no purpose. Peter S. Hicks, *near Wilmington, Delaware.*

The disease in swine called "thumps," we have no knowledge of, though we may have met with it under some other name. In the 8th volume of the Cultivator, page 32, it is stated that Dr. Shelby, of Tennessee, had used calomel for this disease with some success; but the quantity given, or the manner of administering it, is not given. We invite the suggestions of those who have any knowledge of the disease and its cure.

Hoof-ail, or "Foul in the Foot."

This is a disease which affects the feet of cattle in a similar manner to what the feet of sheep are affected by the "foot-rot." Some have supposed that the diseases are in fact identical; but attempts have been made to innoculate cattle with the virus from sheep having the foot-rot, which failed; and this has led to the conclusion that the two diseases are confined to the species of animal in which they appear.

Hoof-ail, like foot-rot, though it may originate spontaneously, or from accident, is, when once induced, believed to be contagious, and hence, when an animal is discovered to be affected, it should be kept by itself till the danger of communicating the disease is passed.

The first indication of hoof-ail, is a soreness and lameness in whichever foot is attacked. If no remedy is applied, the disease progresses rapidly—there is more or less swelling immediately above the hoof and about the pastern joint, accompanied frequently by great heat and high inflammation. The hoof soon separates from the skin on the inside, between the claws, and in aggravated cases the hoof sometimes cleaves off. The disease appears to occasion the animal great pain through its whole course.

The first thing to be done towards cure, should be to cleanse the foot thoroughly by washing in strong soap-suds, or a lye of wood-ashes. Examine the inside of the claws, and if there is any appearance of pent-up matter, pare away the hoof so as to admit a free discharge. Apply a solution of blue vitrol wherever the disease is manifested, and this wash may be repeated with advantage once or twice a day, till the disease is evidently subdued. A pledget of tow, saturated with tar, and bound in between the claws, has been found useful in healing the foot after the other applications have been used.

Youatt recommends bleeding in the coronet, (the junction of the hoof with the skin,) where there is much swelling and inflammation. The animal should be kept in a dry place; a comfortable stall or shed is the best situation.

Domestic Economy, Recipes, &c.

Preserving Meat Fresh.

It may be of some benefit to a portion of your patrons to know how a few citizens in this section have managed, this warm changeable winter, to preserve their beef, pork, poultry, and other fresh meat, for some time in good condition.

One successful method has been practiced by placing one *cask* within another, packing straw between the two, on the bottom and around the sides. The meat was frozen, and packed in straw within the inner cask, secured well at the top from air during the warm weather.

Col. Smith, of Bristol, slaughtered a large number of fat weathers, which he designed to market in the carcass; but the warm spell of weather in the month of November, which was so destructive to fresh meat in this region, caused him to boil them up for their tallow only. The next cold turn, he dressed off about 300 of poultry—a sudden change soon after was threatning them with a sweat; but having at hand an abundance of fresh sheep's pelts, he concluded, by way of experiment, to try their virtues upon his fowls, and accordingly spread a layer upon a floor 5 or 6 deep; then after stacking his poultry upon them, covered them well over with the same in so nice a manner as to keep out the warm air through several severe thaws, before he was blessed with snow enough to sleigh them into a northern market, where they in due time arrived in good condition. Had he known previous this method of saving his meat fresh, it would have told him dollars, by thus keeping his fat mutton. S. W. Jewett.

Fine Pickled Cabbage.—An exchange paper gives the following directions for making this excellent and wholesome relish:—Shred red and white cabbage, spread it in layers in a stone jar, with salt over each layer. Put two spoonsful of whole black pepper, and the same quantity of allspice, cloves and cinnamon, in a bag, and scald them in two quarts of vinegar, and pour the vinegar over the cabbage, and cover it tight. Use it two days after.

Pumpkin Butter.—Boil a barrel of sweet cider down one-third, then add gradually two bushels of small cut pieces of pumpkins; stirring all the while, until boiled to about 12 gallons. Just before taking off, add half a pint of ground cinnamon, and such other spices as may be agreeable. Fine, where apples are scarce, and said to be excellent for king or countryman, the latter deserving it best.

Sweet Apple Pudding.—Superb, cheapest, and best, proved by repeated trial: 1 pint scalded milk, ½ pint Indian meal, teaspoon of salt, an equal bulk or more of sweet apples cut small—baked at least three hours.

Preserving Apples.—"Lock them up in a dry cellar, and hide the key," says a cotemporary.

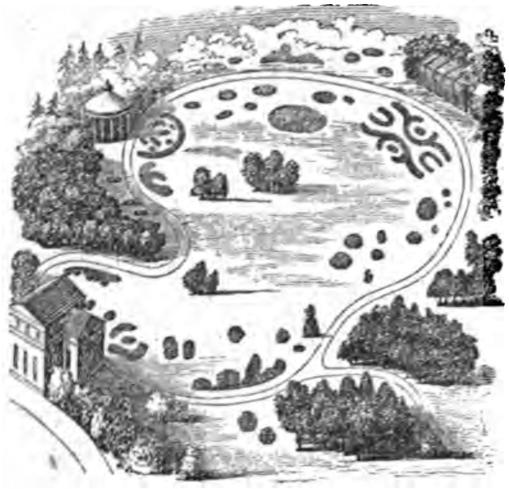
To toast Cheese. *Very fine.* Slice it into a saucepan, with a little butter and cream. Simmer very gently till quite dissolved. Remove it from the fire, let it cool a little, add some yolk of egg, well beaten; make it into cakes, brown it before the fire, and eat warm.

Preserving Hams.—A canvass cover for each ham, well whitewashed, is an infallible protection of hams against flies. They may also be well kept in dry sawdust.

Whitewash for Fences.—One ounce white vitrol, (sulphate of zinc) 3 ounces of common salt, to every 3 or 4 lbs. of good fresh lime, it is said, render it very durable, exposed to the weather.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.



The Shrubbery and Flower Garden.

Nearly all the flower gardens of the country are laid out in geometrical lines; a style, it is true much better adapted to the small piece of ground allotted to flowers, than to the larger landscape garden composed of trees, lawns, and sheets of water. With a wish however, to encourage a more graceful, pleasing, and picturesque mode of laying out even the small flower garden in connexion with the shrubbery, we have given the above plan, which nearly explains itself. It is merely necessary to remark, that the boundary of the grounds is composed chiefly of trees and shrubs, the more central portion being devoted to flowers. The latter is a very smooth and closely shaven green, around which the walk passes, the beds being cut into the turf and raised scarcely above the surface. Most of them are simple circles or ellipses, the shape of which is easily preserved; but a few are of the arabesque, or the more complex geometric form. The latter are only introduced at those points in front of the dwelling, and of the green house (or grape house) at the right, and the circular seat at the left.

The space thus occupied may be from a quarter of an acre to two acres. If laid out and planted with skill, it will present an infinitely more pleasing appearance, and variety of aspect, than the geometric garden. It entirely removes that most disagreeable feeling of constraint, with which one feels his mind fettered, when trying to draw pleasure and beauty from straight lines and stiff curves. But no one should think for a moment of attempting this mode, unless he can mow the surface of the lawn once a week, and keep the walk as smooth and hard as a floor, besides preserving the shrubbery and flower beds in the best order. Less labor, however, is required to keep such a flower garden as this *of a given size*, than one of any other arrangement. Certainly we derive a great deal more of genuine beauty from the work of our hands, by the adoption of this than by the old-fashioned style.

To give proper directions for executing such a plan, to one who has not looked into the subject, would require a greater number of pages than we have already written lines; we must therefore leave this part of the subject, for the purpose chiefly designed at commencement, of giving a short list of some of the best ornamental hardy shrubs and flowering plants, to assist the selection of those who, at the present season, may be about commencing small ornamental plantations; beginning first with shrubs, in the order of their season of flowering:

Early Spring Flowering.

Daphne mezereum (pink mezereon) is covered with a dense profusion of pink-lilac, flowers almost as soon as the frost leaves the ground. Berries poisonous.

Cydonia japonica, Japan quince, is a shrub of slow growth, but when several years old and full of its dazzling red flowers, it presents a mass of great brilliancy, and there is nothing at this season to supply its place.

Amygdalus nana, dwarf double flowering almond, densely covered with pink flowers, resembling masses of miniature roses.

Ribes aureum, Missouri currant, yellow flowers of moderate beauty, but delightfully fragrant.

Shepherdia argentea, Buffalo berry, flowers early, but its chief beauty is the autumn, when loaded with red berries.

Late Spring Flowering.

Ribes sanguineum, scarlet currant, needs some protection in winter—its dense masses of fine red flowers render it very showy. A new double variety, is still finer.

Xylosteum tartaricum, tartarian honeysuckle, flowers varying from white to pink, thickly sprinkled among its small glossy leaves, are unexcelled in beauty. A striped variety is exceedingly delicate and fine.

Philadelphus grandiflorus, with its large clear white flowers, is more showy than *P. coronarius* (syringo) which however excels it in fragrance.

Halesia tetraptera, silver bell tree, handsome pendant white flowers.

Spiræa hypericifolia, flowers white, small, abundant—pretty.

Kerria japonica, Japan globe-flower, flowers double, yellow—often continues flowering till late autumn.

Berberis vulgaris—barberry—yellow flowers in handsome racemes, with showy red berries in autumn.

Calycanthus floridus, sweet scented shrub, flowers blackish purple, valued for their great fragrance.

Robinia hispida, rose acacia, large, handsome rose flowers—succeeds best in light soils.

Syringa vulgaris, common lilac, purple, red, and white. *S. chinensis*, Siberian lilac, is of lighter and more graceful growth, and when large, presents a splendid appearance.

Chionanthus virginica, white fringe tree.

Early Summer Flowering.

Viburnum opulus, snowball, well known for the splendor of its large balls of brilliant white flowers.

Rhus cotinus, purple fringe tree, becoming remarkable towards autumn for the feathery investment of its large panicles, resembling clouds of purple mist among the foilage. Singular and much admired.

Cytisus laburnum, common laburnum or golden chain; its pendant racemes of fine yellow flowers give it a very elegant appearance.

Symphoria racemosa, snowberry, well known for its pure-white berries in autumn.

[During this part of the season, roses make a most brilliant display. Among the thousand varieties named in catalogues, even a select list would be too long for this article; but the culturist may content himself, if he can procure as fine ones as the *Queen of the Prairies*, *Baltimore Belle*, and old and new *Crimson Bour-*

salts, for training; the *Persian Yellow* and *Scarlet Austrian*, for early flowering small roses; *La Reine*, *Madame Laffay*, and *Marquise Boccella*, among hybrid perpetuals, which flower till winter, and are quite hardy; *George the fourth*, *Bonne Geneveive*, and *Brennus*, of hybrid China roses; and *Souvenir de Malmaison*, among Bourbons, and *Madame Hardy*, among white roses.]

Late Summer Flowering.

Hibiscus syriacus (althæa) single and semi-double, white, shaded with purple; the double varieties have less beauty of form.

Magnolia glauca, large handsome white flowers, of rich appearance.

Æsculus macrostachya, dwarf horse-chestnut, flowers in large showy spikes of clear white.

Spiræa tomentosa, flowers in reddish purple dense terminal racemes.

Everblooming roses form the most interesting and showy display from this time till late autumn.

Climbers.—Some of the most interesting are, the *Bignonia radicans*, trumpet flower, with its dark rich, trumpet-shaped corols; *Bignonia grandiflora*, with very large rich orange flowers, sometimes in magnificent racemes a foot long,—slightly tender; *Aristolochia tomentosa*, and *A. sipho*, handsome, delicate twiners, with singular pipe-shaped, but not showy flowers; *Clematis virginica*, or native clematis, flowers in fine white clusters; *Atragene americana*, flowering early; purple; *Periploca græca*, with a dense growth of fine glossy foilage; *Ampelopsis hederacea*, often covering the entire trunks of large forest trees, reddening to a brilliant scarlet in autumn; and several species of *Lonicera* or twining honeysuckle.

Herbaceous Perennials.

(Average season of Flowering at Albany and Rochester.)

Flowering early part of 4 mo.—(April.)

The *snow-drop*, *crocus*, *winter aconite*, *Pansey*, *Siberian squill* and *Persian Iris*, are the earliest spring flowers in open ground. The last is a plant of great beauty and fragrance. The *Erytheonium dens-canis* of Europe, is a beautiful reddish purple flower, and one of the earliest, appearing before either of the American species. The Siberian Squill is a small but very graceful plant, with fine brilliant deep blue flowers.

The *Hepatica triloba*, with its various shades of pink and purple, and with pure white; and the *Claytonia virginica*, with its beautiful pink striped flowers,—are both common natives of our woods, and are among the earliest when transferred to the garden.

The many varieties of *Primula veris* (cowslip, &c.) presenting yellow, orange, red, lilac, and purple, with their various shades; and with flowers single and double, from half an inch to an inch and a half in diameter,—are among the finest ornaments of early spring. The *hyacinth* is well known for its beauty, fragrance, and endless varieties.

Flowering latter part of 4 mo.

Our native woods furnish several fine early flowers; among them, *Sanguinaria canadensis* (bloodroot) and *Anemone thalictroides*, both with white flowers; *Corydalis cucularia*, of delicate growth and white racemes; *Erythronium lanceolatum*,* yellow, and *Pulmonaria virginica*, pale liquid blue, both elegant plants; while the minute *Houstonia cærula* and *H. cilislata*, though natives, are of rarer occurrence. *Phlox reptans* is a fine purple-red flower. The several species and varieties of *Narcissus*, are a showy family of plants. The *crown imperial* (Fritillaria imperialis) is a stately and handsome, but not brilliant flower, and *F. meleagris*, is less showy, but singular. But the *tulips*, with their numerous shades of nearly all colors, variously intermingled and variegated, with nearly unsurpassed brilliancy and gaiety, eclipse all other flowers at this season.

Early part of 5 mo.—(May.)

Aquilegea canadensis (native columbine) with flowers of combined yellow and red-orange, is brilliant and elegant. *Phlox divaricata*, from the woods, with white variously shaded with blue and purple, is a handsome flower. Phlox subulata, moss pink, is extremely showy in masses, covering whole square yards with an unbroken mass of flowers. *Phlox setacea*, is a more delicate and less rapid grower, but nearly as showy; and a variety of the latter, with flowers of snowy whiteness, though slightly tender, is a desirable plant. The *auricula*, flourishing only when shaded, is remarkable for its clear rich hues of yellow, red, and purple. Among other plants flowering at this season, are, *Dodecatheon meadia*, reddish purple and white, an elegant plant; Delphinium tricorne, a fine early blue larkspur; *Convallaria majalis*, lily of the valley, with pretty white flowers; *Polemonium cæruleum*, blue; *Silene pennsylvanica*, red; *Corydalis glauca*, purple and yellow; *Veronica spicata*, blue.

Latter part of 5 mo.

Trillium grandiflorum, white; *Veronica gentianoides*, blue; *Geranium sanguineum*, red; *Trollius europeus*, yellow; *Phlox ovata*, rose; *Pæonia tenuifolia*, dark crimson,—are all fine though not splendid plants. Some double varieties of *Aquilegea vulgaris*, or garden columbine, are very rich and fine. The genus *Iris*, with its many showy species of blue, purple, yellow, variegated, mottled, and white, forms a very conspicuous group. But the most splendid flowers are the Pæonias—among the finest of which are the *Pæonia albiflora*, with its varieties,—*Whitleii*, pale pink becoming white, in large globular double flowers five to six inches in diameter,—*Humei*, dark rose, large and densely double,—and *Fragrans*, red, not so large, but very fragrant; P. Pottsii, with flowers of dark rich velvet crimson; P. Reevesii, splendid double rose; and the rose and pink varieties of *P. officinalis*. These are all perfectly hardy, and of very easy culture, the double flowers usually varying from four to six inches in diameter.

Early Summer Flowers.

Among those which are decidedly of the first class for ornament, are the following:—*Dictamnus fraxinella*, with its white and purple varieties; *Phlox maculata*, fine red; *Spiræa aruncus*, with large feathery plumes, and *S. filipendula*, smaller and of clearer color—both white; *Clematis erecta*, from two to four feet high, a mass of white bloom; *Gladiolus communis*, red-purple; *Campanula persicifolia*, blue and white, the double white variety truly splendid; *C. grandiflora*, with large, blue, rich flowers, and elegant growth; *Digitalis purpurea* (fox glove) richly dotted purple, and white; *Lythrum salicaria*, and *L. virgatum*, purple; *Orchis fimbriata*, with beautiful fringed purple spikes, native; and *Papaver orientale* and *P. bracteatum*, oriental and Caucassian poppies. *Papaver nudicaule*, a biennial, is one of thefinest clear rich yellow flowers.

Mid-Summer.

The duration of the earliest flowers of spring, is of but few days at fartherest; but as we advance in the season, the period of each plant is greatly prolonged, many in summer and autumn continuing for several weeks. Hence a fewer number is required to maintain a continued bloom.

Some of the finest flowers of mid-summer are the following:—

Spiræa ulmaria, pure white; and *S. lobata*, pink-purple, flowers in the richest fringed or feathery masses.

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* This fine early flower, sometimes called "*dog-tooth violet*," is evidently the plant described in Bryant's "*Yellow Violet*,"—there is, however, no more propriety in dropping the first part of the name, and calling it simply a violet, than to call a certain bird, known as a *titmouse* (plural tit-mice?) a *mouse*.

Lilium canadense, dull orange, but very elegant in form, and *L. candidum*, common white lily.

Chelone barbata, red-orange.

Catenanche cærulea, blue.

Spigelia marilandica, red.

Monarda didyma, scarlet.

Phlox paniculata, light red.

Nuttalia digitata, purple.

Liatris spicata, and *L. scariosa*, purple.

Lathyrus latifolius, (perennial pea,) purple.

Yucca flaccida, white. A rich, elegant, and showy plant.

Campanula carpatica, blue.

Late Summer and Early Autumn.

Many of the preceding, continue flowering into autumn. The following may be named in addition:—*Dracocephalum virginianum*, red-purple; *Cassia chamæchrista*, and *C. marilandica*, yellow; *Lilium tigrinum*, (tiger lily,) red-orange; *Hibiscus palustris*, and *H. carolinense*, rose-red; *Gentiana saponeria*, blue, and *G. crinita*, light-blue; *Aster novæ-angliæ*, purple.

Dahlias form the most splendid autumnal show of herbaceous perennials, but as is well known, are tender and often difficult to winter.

Annuals constitute a very fine department of late summer and autumn flowers, immediately following the season of herbaceous perennials. They need, as every one knows, yearly renewing by seed, and hence many neglect them on account of the care of sowing and seed-saving. Among the finest annual flowers are the following:—*China Aster*, many varieties; Yellow and purple Sultans; Cypress vine; Globe Amaranth; Balsams; African Hibiscus; Nasturtium; Scarlet Portulacca, Drummond's Phlox; Petunias, of several colors; Two-colored Collinsia; Dwarf Convolvulus; Mexican Ageratum; Three-colored Gillia; Dwarf Larkspur; Golden Coreopsis; Showy Calendrina; Scarlet Cacalia; French Marigold; and Dwarf Lupin.

Tender and greenhouse plants afford many valuable additions to summer and autumn flowers. Many interesting additions might also be made to the preceding lists, did space permit; but our object at present is to furnish only a select and limited collection, to assist those but partially acquainted with them, and who wish to cultivate but comparatively few.

Abstract of Remarks on Various Pears,

DESCRIBED IN THE FIRST VOL. OF THE HORTICULTURIST.

(*Continued from page 87.*)

Flemish Beauty—Cheever Newhall (416) recommends this pear for strong rich soils. J. J. Thomas (480) says it is "a large, fair and productive variety, and though not of first rate flavor, proves worthy of cultivation." First of November.

Fondante d'Automne—Mr. Ives of Salem, Mass., (279) says "that no autumn pear surpasses the Fondante d'Automne." Mr. Downing observes, "we have always found this variety truly delicious." Last of September.

Glout Morceaux—M. P. Wilder (21) says of this: "It is truly an excellent, rich, sugary pear. The tree is hardy, a great and constant bearer; but it requires, like most pears, good cultivation. Few varieties succeed so well on the quince as the Glout Morceaux; a tree of which in my own ground, annually produces a barrel of large perfect fruit." Otis Johnson (146) says the Glout Morceaux does not succeed well in his garden at Lynn, Mass. His trees of this sort are on "quince stocks—of good size, and all quite thrifty. The fruit sets plentifully, but blights and falls at an early stage, and this is the only variety under my cultivation that blights." Downing (146) remarks, that though highly valuable elsewhere, it may prove too delicate to be worthy of cultivation quite so near the sea, even on quince stocks. Cheever Newhall (415) recommends the Glout Morceaux for strong, rich soils. December.

Heathcot—Downing (241) makes this one of a select list of twelve. Cheever Newhall (415) considers it one of the best. Downing (417) thinks this pear has not been rated as highly as it deserves to be, and states that Col. Wilder, after several years trial, considered it nearly, if not quite equal, to the White Doyenné. "When we add to this that the tree is thrifty, and a good and regular bearer, that the fruit does not crack or blight, we cannot but consider the Heathcot worthy of being adopted into a select list of fruits, of the first quality, for orchard and market cultivation." Middle and last of September.

Jargonelle—Cheever Newhall (415) considers this and the Madeleine the best quite early pears, which, however, he says cannot "be classed as first quality." J. J. Thomas says (480)—"The Jargonelle is a fine early pear, rather course but quite rich in flavor, and needs indispensably house ripening, not only to perfect its flavor, but to prevent the inevitable rotting at the core when left too long on the tree." Last of July and first of August.

Louise Bonne de Jersey—Otis Johnson (278) named this, as in his opinion, the best fall pear. "The Louise Bonne de Jersey," he said, "is the most productive on young trees of any pear I cultivate; and I think if I could have but three, I would be forced to include it; yet I may alter my opinion when the trees become older."

Madeleine—J. W., Baltimore, says (99)—"The Madeleine pear is now (July 14th) in perfection with me. It has fruited for two years past; but I am obliged to say that generally it does not ripen well. It is apt to rot at the core." Mr. Downing in a note to the above says: "The Madeleine, and we may add, almost all other pears, *must be ripened in the house*. If left to ripen on the tree, they have little or no flavor, and soon decay." Cheever Newhall (415) writes—"For early fruit the Madeleine, (or Citron de Carmes,) ripening in my garden the last of July, and the Jargonelle about ten days after, are the two best pears of the season, but cannot be classed as first quality. * * * With me the Madeleine succeeds well on its own roots, but on quince roots it cracks, is very astringent and worthless." J. J. Thomas remarks (480) that with him the Madeleine maintains its high character. Middle and last of July.

Napoleon—W., of Baltimore, says of this pear—"When in Paris, at the end of September, the Napoleon was one of the principal pears in season; it is juicy, but not high flavored."

Onondaga—*Swan's Orange*—Downing thus speaks of this new variety: "A fruit of the first size and quality, in all respects; supposed to be an American variety. * * * As a productive and vigorous tree, and a large and most excellent fruit, it has probably not one superior as an October pear."

Osband's Summer—This is a popular variety in the neighborhood of Rochester. W. R. Smith, Macedon, N.Y., says of it: "This beautiful and excellent native pear has acquired considerable notoriety in this vicinity, and is destined, without doubt, to take rank with the best of its season. * * * It is a fine grower, and bears young and well. * * Size scarcely medium." Early in August.

Oswego Beurre, or *Reed's Seedling*—Downing (324) says of it—"It combines, in a great degree, the finer qualities of the White Doyenné and the Brown

Beurrè; is a remarkably hardy, thrifty sort, an early and abundant bearer, and will undoubtedly soon become a very popular variety. Fruit of medium size. * * * It ripens at the same time with the White Doyennè, and keeps well. From its early and abundant bearing, and its gradual maturity, it is admirably calculated for a market fruit." J. W. P. Allen, Oswego, (533) considers this pear the most valuable known at the north, for general cultivation, on account of its early and profuse bearing, its fine flavor, good size, and general hardiness. He considers it an early winter, rather than a fall fruit.

Passe Colmar—M. P. Wilder (21) thus speaks of this well known pear—" As a hardy, vigorous excellent pear, the Passe Colmar has few superiors. It is prolific to a fault, and requires judicious management. To insure fine fruit it is necessary to commence the trimming process as early as the best specimens can be distinguished. Mr. Wilder recommends this as one of the *best five winter* pears. Cheever Newhall (415) says—" The Passe Colmar seldom attains perfection, unless the fruit spurs are severely pruned out in the spring, or the fruit thinned when quite small." J. J. Thomas (480) says—" the same objection occurs here to the Passe Colmar, as at Dorchester, the fruit very rarely attaining perfection under ordinary management." November to February.

Pratt—A new Rhode Island pear. Downing (210) says " there is every reason to believe that among the many sorts annually offered to public notice, most of which prove indifferent in quality, this will be an exception—a fruit of real merit." Size above medium. September.

Seckel—This little world-renowned "mouth-water," patiently receives the encomiums of all. W., of Baltimore (197) says: " I was told in England, by gardeners and fruiterers, that the Seckel was the best flavored pear known, but that it would not keep in their climate." John C. Lee (279) considers it, all in all, the best fall pear. Downing (279) recommends it as the best fall pear for gardens south and east of Newburgh. J. J. Thomas (480) observes that the Seckel maintains its high character with him. August to October.

Skinless—Of this J. J. Thomas (480) says—"The Skinless is one of the freest growers of all pears, is abundantly productive, and always bears fair and uniformly good fruit, though not rich and high flavored. It ripens before the Bloodgood, and, all points considered, is one of the most desirable early pears, especially on clayey soils." First of August.

Urbaniste—Cheever Newhall (415) remarks—" The Urbaniste is more sure of producing a crop of *well-ripened* fruit, than any other variety I cultivate except the Bartlett and Vicar of Winkfield." J. J. Thomas (480) says—" The Urbaniste is an excellent pear, but is too acid for many palates, and is a very moderate bearer." September to November.

Vicar of Winkfield—M. P. Wilder (278) considers this, taking all things into consideration, the best fall pear. " His high opinion of this variety was based on a thorough trial of its good qualities; which were these: regular and great productiveness, never blowing off the tree, large, fair, unblemished fruit, and its remaining a long time in use." " True," he added, " the fruit is only second rate; but while it is of fair quality for the table, it is excellent for a long time for cooking." Saml. Walker (278) coincided in this opinion, and says (458) that this pear requires careful ripening. November to January.

Winter Nelis—M. P. Wilder (19) remarks of this pear—" As a sweet, melting winter pear, it has no equal. Connoisseurs generally prefer the brisk, vinous juice of the d'Aremberg; but some of our good judges esteem the Nelis above all others of the season. The growth of the tree is not strong, but more so on the quince, to which it seems well adapted; it is hardy and thrifty in rich soils, otherwise the shoots are more stunted and feeble than is usual with most sorts. Keeps and ripens well, and bears good crops." It appears (279) to be the favorite winter pear of Robt. Manning, J. M. Ives, and John C. Lee. Downing in the same article (pomological gossip) remarks that the " Beurré d'Aremberg and Winter Nelis are about equally popular as winter fruits—the former being the best bearer, and the latter the most luscious flavor." J. J. Thomas (480) says that with him the Winter Nelis maintains its high reputation.

It may be noticed by some, that I have omitted, in the above abstract, three or four varieties of pears which were noticed in the first volume of the Horticulturist. These were either new native varieties, described for the first time, or foreign sorts not yet introduced. As this abstract is chiefly valuable to those who already have some acquaintance, by books, or otherwise, with the varieties named, I thought that nothing less than a complete description of new and unknown varieties would be satisfactory to them. This, the limits of an abstract would not allow.

Toledo, Feb. 9, 1848. F. J. Scott.

Transplanting Fruit Trees.

The experience of intelligent cultivators in different parts of the country, strongly sustains the opinion, that a great loss usually results from a neglect of pruning the tops of young trees, at the time of transplanting. Of the hundreds of thousands which are annually transferred from nurseries to private orchards and gardens, probably not one in twenty receives sufficient trimming or heading back.

Unskilful or improper trimming—applied to the side branches of the trunk, and leaving a heavy head at top, is very common. The head thus becomes too heavy for the slender stem to support, the latter forming, as a western cultivator remarks, " a graceful curve, in the shape of a French dancing master in the act of picking up a lady's fan." It must be distinctly borne in mind that it is not this kind of pruning, but thinning and shortening back the top, which it is intended here to recommend.

To remove a young fruit tree from the nursery, without a loss of a part of the roots, is totally impracticable. A network of fibres often extends on every side, to a distance quite equal to the heighth of the tree. Roots more than a foot in length, except for unusually large trees, are scarcely ever taken up by the most careful nurserymen. Hence a considerable excision becomes unavoidable. As the roots which remain to the tree, must supply moisture for all the leaves, it becomes evident that the number of leaves must be either lessened, or else each leaf will only receive a partial supply, in which latter case, its growth cannot be healthy and vigorous.* The top should therefore be trimmed by the knife, at least as much as the roots have been trimmed by the spade. Trees four or five feet high, usually lose at least half their roots by removal, and those nine or ten feet high, probably at least four-fifths.

The amount of thinning at the top, must, however, vary somewhat with the species of fruit tree. Some, as the peach, have a strong reproductive power. A young peach tree, may be cut off at the surface of the ground, in spring, and a new shoot will arise and attain a height in autumn nearly equal to that reached where there is no heading down. The practice is common among nurserymen, of removing peach trees while in bud; these are headed down nearly to the surface, yet such buds often make a growth the same season nearly or quite equal to those buds not transplanted. Hence, a transplanted peach tree will bear a very heavy pruning at the top, with no ultimate loss, but an actual gain, in the growth and size of the tree. A cherry tree has less reproductive power—a young seedling cherry, headed down when transplanted, will not make near so fine a growth as if left uncut at top. Hence cherry trees should be more sparingly pruned when set out. The reproductive power of the apple lies between the two; and should consequently receive a considerable, but not excessive pruning.

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* That is, until by growth, a new set of roots is produced.

The amount of thinning must also depend partly upon the climate. Where moisture is prevalent, less pruning is required than under the influence of dry, hot summers. Hence the climate of England admits a greater quantity of top and leaf, than that of the United States.

Many experiments might be adduced to show the advantages of freely pruning transplanted trees. As a sample of the whole, we need only to refer to two interesting experiments given in the Horticulturist. One hundred and eighty apple trees, in fair condition, were transplanted carefully in good ground. One half had their tops shortened back, so as to leave only one bud of the previous season's wood. The other ninety were set out without any shortening. Of the pruned trees, only *two* died—of those not pruned *eight* died. The pruned trees nearly all made vigorous shoots—some eighteen inches. The unpruned grew but little, none making shoots over six inches. The second year, the pruned trees outstripped the others in size and growth, and presented a much more luxuriant aspect. The second experiment was performed with 78 peach trees, three years from the bud, and consequently of large size. One half had their heads reduced one half; the other were planted entire. The season was dry. *One* only of the pruned trees died, the rest made fine bushy heads. *Twelve* of the unpruned trees died, and none made a fine growth, many of the branches dying —nature thus performing imperfectly what the knife should have done.

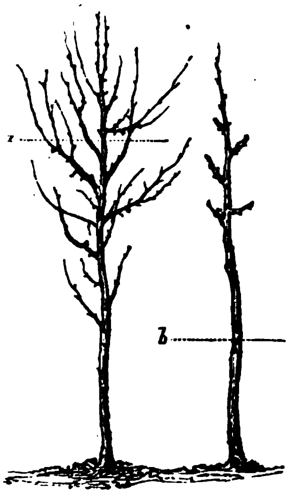


Fig. 1. Fig. 2.

The annexed figures will exhibit more distinctly the proper mode of heading back apple and peach trees. Fig. 1 is a young apple tree with branches remaining, as commonly taken from the nursery; fig. 2, the same trimmed to a few branches, and those headed back within a few inches of the stem. It is better to leave for these side branches, vigorous shoots of the past year, and cut off closely all others. Should the top, as represented, be too high, the tree must be headed down lower, as to the dotted line *a* in fig. 1, leaving the tree in the form of the portion above *b* in fig. 2, the dotted line *b* representing in this case the surface of the ground. Peach trees may be treated in a nearly similar way.

Trees of moderate size, set out in spring, and thus freely pruned, scarcely ever need staking. If set out in autumn, the pruning should be deferred till spring, which is indispensable with half-tender trees, as the peach, and in which case they must be secured from the effects of the wind by a stake, or by a mound of earth. If a stake is used, care is needed to prevent chafing the tree, by the use of a large soft band. We have found a mound of earth one foot high, with a piece of turf at top encircling the tree, a sufficient stiffener against all winter winds. Such a mound also excludes the frost from the roots, and renders autumn transplanting of peach trees comparatively safe. It is levelled to the surface in the spring after the head is pruned.

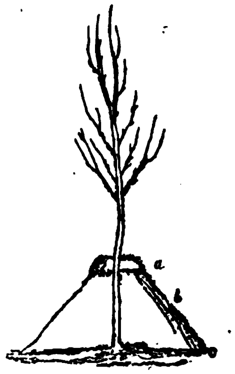


Fig. 3.

In the annexed figure (fig. 3,) *c* indicates the common surface of the ground, the dotted lines at *b* the mound of earth, and *a* the piece of turf at top for more effectually securing the tree to its place. One of these mounds is thrown up with a spade in thirty seconds.

There are some other important requisites in successful transplanting more or less known to cultivators; among the principal are,—pruning off all the bruised ends of roots, to prevent decay spreading; pouring in a few quarts of water to settle the fine earth among the roots, before the whole is quite filled; and setting the tree at the same depth as before removal, raising the mellow earth in a convex form two or three inches above the surface, to allow for settling.

Grafting and Pruning Old Orchards.

[The writer of the following has had much experience, and has shown unusual skill, in the successful management of Fruit Trees, and his remarks are commended to the attention of orchardists.—Ed.]

There are thousands of large apple trees grafted every year, and much loss is often experienced from a lack of knowledge as regards their management. I have thought that the experience of one who has spent much time in grafting and pruning such trees, might be a benefit to those about having the work done. Trees are often mutilated and disfigured by ignorant persons. Some have thought that a few limbs grafted on the top of a large tree was sufficient—the other branches were cut off close to the trunk. Such persons do not consider that the larger the top, the more fruit the tree will produce. When there are but few limbs left, nature makes an effort to supply that which is lost; they make a vigorous growth of wood, and it is many years before much fruit is borne. The wounds that are made soon begin to decay, cavities are formed, and water accumulates in the trunk, which is taken up and carried into circulation by the sap, often causing death to the tree in a few years. A few such trees as I have described would spoil the beauty of any farm or rural scene, let all other improvements be what they may.

But I shall endeavor to show in as plain a manner as possible, (I do not pretend that it is perfect,) my way of management. In grafting large trees it is necessary to form a round well balanced top; and in order to effect this, the lower limbs should be grafted near their extremities. The next grafts above, nearer the centre of the tree; for young grafts make an upright growth, and if one set is placed directly above and near the lower, they soon grow together; but if placed gradually nearer the centre as you proceed in forming the top, the fruit will all be exposed to the sun and air alike, and all the grafts will have an equal chance to grow.

In trimming newly grafted trees, a fine saw should be used; and in order to create a free growth of wood the trees should be attended to early in the month of March or beginning of April. The limbs should not all be cut off the season after grafting; for if trimmed too much at first, too much sap is forced into the grafts, which are apt to be blown off by the high winds that occur during the summer. When this happens, the trees are nearly ruined, and no skill can restore them. The practice of pruning apple trees in the month of June, may be well enough where the present crop is an object; but it is proper for every one who undertakes such work, to understand the difference between pruning to create a growth of wood in newly set grafts, and pruning to benefit the fruit which is growing on the tree. I. HILDRETH. *Seneca, N. Y., Feb.*, 1848.

Apricots.

A correspondent in Virginia inquires how apricots succeed when budded on young peach trees; and which are the best varieties.

We have found the apricot to succeed well when budded on the peach at the surface of the ground. When the tree is transplanted, it should be set a little lower, to exclude the eggs of the peach worm. It is hardly necessary to say that the peach stocks should be healthy and entirely free constitutionally or otherwise, from the yellows. The plum is usually preferred as a stock for apricots, but we have not found that striking superiority which some authors have described.

The best standard varieties are, the *Breda*, remarkable for vigor and productiveness; the *Peach* and *Moorpark*, for large size and fine quality; the *Black*, for its extreme hardiness (equal to that of an apple-tree,) though second in quality; and the *Large Early*, rather new in this country, for its early maturity.

Pears for Vermont.

A "Vermont subscriber" wishes to inquire "what experience says of grafting the pear upon thorns close to the ground; its effect upon both tree and fruit. Also the best twelve varieties for enduring the hard winters and late frosts of Vermont, yielding the greatest quantity, largest size, and best quality."

The thorn does not appear to have been much used as a stock for the pear in this country; consequently it cannot be recommended with confidence. In England it has been employed to a considerable extent, and has succeeded well, especially on hard clayey soils where the pear does not otherwise thrive well. It should be grafted below the surface. It is believed to render the fruits harder and smaller than on pear stocks. The trees are rendered less vigorous, and come sooner into bearing. But after extensive trial, the quince is greatly preferred for dwarfs.

The propriety of planting trees with quince stocks for extensive marketing, in a country where land is cheap and trees dear, may be questioned except for a very few varieties. The only instance we know of extensive plantations of such trees, is the large orchards of T. Rivers of Sawbridgeworth, England, which consist chiefly of the Louise Bonne of Jersey, a large fine pear, which succeeds uncommonly well on the quince. Where trees can be procured cheaply by the quantity, and where it is desirable to obtain speedily a crop, there is no doubt it may succeed, provided the land is kept highly fertile and in good cultivation, and suitable varieties are selected.

It is very difficult to furnish select lists of fruits, adapted to particular regions of country, where *all* the best varieties have not been fully tried. The difficulty is much increased by the different degrees of excellence which different cultivators attach to various qualities. The following twelve varieties however, may be employed perhaps with a promise of good success, for the qualities indicated by our correspondent.

For *Pear Stocks*—Golden Bilboa, Bartlett, Louise Bonne of Jersey, Onondaga, Flemish Beauty, Dix, Beurré Bosc, White Doyenné, Stevens' Genesee, Vicar of Winkfield, Beurré d'Aremberg, Columbia. These are all fine table pears, mostly quite large;—if for cooking, the three following winter varieties may be chosen: Catillac, Pound or Winter Bell, Black Worcester.

A part of the preceding have been found to succeed well on the quince, and some others may, on more extensive trial. The following however are recommended from experience *for the quince*, among large pears: Louise Bonne de Jersey, Duchesse d'Angoulême, Long Green of Autumn, Beurré d'Aumalis, Vicar of Winkfield, Golden Bilboa, Beurré Diel, Beurré d'Aremberg, Glout Morceau.

Apples at the South.

"Will apples that ripen late, and keep during the winter in your latitude, answer as good winter apples in this State?" J. R. G. Halifax, N. C.

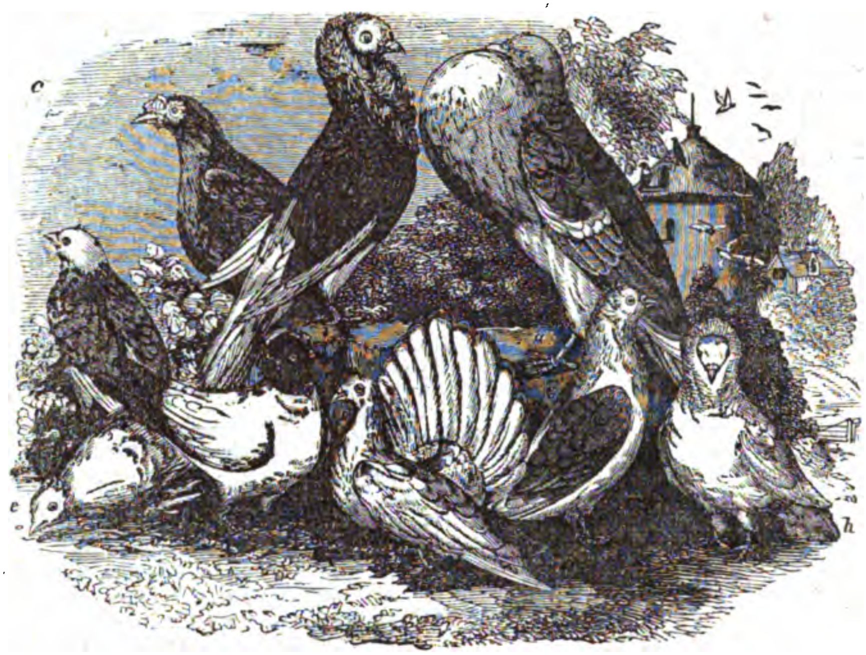
The winter apples of the Northern States, as they are removed South, mature earlier, and consequently are diminished in keeping qualities. As far south as Georgia, some ripen early in autumn. Those varieties which are little changed by climate, as for example the Rhode Island Greening, in other respects do well; but others, as the Baldwin, which are liable to variation, could not be depended on for quality. Indeed, it is exceedingly problematical whether the Baldwin would prove of much value as far south as Virginia. In the extreme southern states, new varieties originated there are found to succeed best. So far south as North Carolina, it is not probable that any of our sorts would prove winter apples except our longest keepers. The *Newtown Pippin*, *English Russet*, *Tewksbury Blush*, *Willow Twig*, of Ohio, *Rawle's Jannet*, and *Pryor's Red*, would probably succeed well. The latter, which proves a good winter apple in Western New-York, would probably become a late autumn variety in North Carolina.

Mulching Fruit Trees.

A correspondent of the Horticulturist planted 150 trees in an orchard in very good but rather dry soil. All were planted with equal care, but a third of them were *mulched*, or the surface of the ground when planted covered with 6 inches of litter. Those thus treated all lived; but 15 of those not mulched died in the hot dry weather of midsummer. It is not stated that the soil was kept clean and mellow around them; which will often save the life of trees, when they would die of neglect.

RAULES' JANNET APPLE, OR NEVERFAIL.—Eli Nichols, an intelligent cultivator of fruit in central Ohio, in speaking of this celebrated long-keeper, in connexion with the Summer Queen, says:—"I have eaten the Queen and the Neverfail each of perfect flavor, on the same day, the first from the tree, and the last from the cave of a neighboring tenant farmer, put up in the most careless manner; and I must testify that the Neverfail, in flavor, seemed more than a match for the Queen, although one year older."

CRANBERRIES ON UPLAND.—Mr. Gardner, of Massachusetts, according to a statement in the Farmers' Cabinet, raised a full crop of cranberries last year on upland, while those on their native swamps were killed by frost.



DOMESTIC PIGEONS.

The family of birds called *Columbidæ*, or pigeons, as arranged by naturalists, comprehends five distinct groups, each containing several species. These birds are, from their characters and habits, objects of much interest. "In no tribe of the feathered race," says the author of the "Natural History of Pigeons," "do we meet with a plumage better adapted to gratify and delight the eye, than that of the pigeons." The variety and brilliancy of the tints, are hardly surpassed even by the humming-birds.

The domestic varieties of the pigeon, have, it is believed, derived their origin from one species—the wild Rock Pigeon, or as it is sometimes called, the Stock-Dove. They have become so numerous that it would be difficult to describe them all, though there are no less than twenty-eight varieties which have been held in more or less estimation by *fanciers*, or breeders. "But," says the author above referred to, "however diversified their forms, color, or peculiarity of habit may be, we consider them all as having originated from a few accidental varieties of the common pigeon, [or rock pigeon,] and not from any cross of that bird with other species, no sign or marks whatever of such being apparent in any of the numerous varieties known to us. In fact the greater part of them owe their existence to the interference and the art of man; for, by separating from the parent stock such accidental varieties as have occasionally occurred, by subjecting these to captivity and domestication, and by assorting and pairing them together, as fancy or caprice suggested, he has at intervals originated all the various and peculiar varieties which, it is well known when once produced, may be perpetuated for an indefinite period, by being kept separate and unmixed with others." Among other evidences of the correctness of this position, it is worthy of particular note, that all domestic varieties of the pigeon, breed readily with each other, and generate a fertile offspring; which it is not probable would be the case if they had originated from distinct species.

The parent species of the domestic pigeon is an inhabitant of the eastern continent, and is extensively distributed through the maritime districts of Europe, Asia, and Africa. It naturally inhabits the high clefts and caves of rocks near the sea. It is abundant along the rocky coasts of England and Scotland, and in the Hebridean and Orkney Islands. Man, it is said, "has only taken advantage of certain habits natural to the species, and by the substitution of an artificial for a real cavern, to which the pigeon-house may be compared, has without violating or at least greatly infringing upon its natural condition, brought it into a kind of voluntary subjection, and rendered it subservient to his benefit and use."

The pigeon has been kept in a state of partial domestication for a great length of time. They are mentioned by the earliest writers, and were held in great estimation by nations of antiquity; by some of which, especially the Assyrians, they were consecrated to sacrifice. In their wild as well as domestic state, they are remarkable for their rapid increase. An old writer calculates that from a single pair 14,760 may be produced in the space of four years. The female lays two eggs at a time, which, if they hatch, it is said invariably produce a male and female. The period of incubation is fifteen days; and in a domestic state, each pair hatches once in five or six weeks; in a wild state they rarely hatch more than twice in a season. The male and female relieve each other in sitting.

The most esteemed domestic varieties of pigeons, are known under the names of carriers, powters or croppers, tumblers, horsemen, jacobines, nuns, owls, runts, turbits, trumpeters and dragoons. There are particular individuals, called *fanciers*, who make the breeding of pigeons a *profession*, and those which they particularly cultivate and esteem, are called *fancy* varieties. Notwithstanding the striking peculiarities of these varieties, it is said that the fanciers can, by a skilful pairing of male and female, "breed them to a feather."

The *Carrier* (*c*) is remarkable for its powers of flight, and for an innate sagacity or instinct which prompts it to return to its home, when it has been carried away and set at liberty. For this reason it has long been used as a medium of communication between distant places; and for speedily conveying intelligence of important events or transactions. Letters of light paper are attached to their wings; the bird is then let loose, when it takes a spiral flight till it reaches a great elevation, and then immediately darts off with great speed in a direct line to the spot from which it was taken. They are trained by taking them when young to a little distance from their cotes, or habitations, and letting them fly back; afterwards they are carried farther and farther at each trial, and so on until they will return home from a distance of many miles. The carrier is one of the largest and strongest of the pigeon family. Its shape is handsome and its attitude and motions graceful. Its color is various, but those of a dark bronze or brown are preferred. On its bill and head it has a fungus-like excrescence, of a dingy white color, which gives the bird a striking singularity of appearance.

The *Dragoon* is similar in habit to the carrier, and is said to be as swift on the wing. It is recorded that on a trial in England, one of this variety flew 76 miles in 2¼ hours.

The *Powter or Cropper* (*a*) is principally esteemed on account of its habit of swelling out the crop. Most of the pigeons have this faculty to a limited extent. By a voluntary effort, the air is drawn into the œsophagus and crop, which, in the powter, become inflated to such a degree that the head is almost hid behind the enlargement, and the bird is obliged to walk in an upright position to sustain the centre of gravity.

The *Tumbler* (*d*) has an odd habit of throwing its body over in sudden evolutions, during its flight. This variety keeps much on the wing, and as they go in compact flocks and rise to a great height, almost beyond sight, constantly wheeling and tumbling as they ascend, they afford much amusement to persons who have the opportunity of noticing them. They have been known to remain on the wing from five to nine hours together, constantly busied in their "fantastic tricks."

The *Jacobine* (*b*) derives its name from a wreath of feathers which, rising round the neck, turn up over the head like the hood or cowl of a Jacobine priest. Of this variety, those are preferred which have the plumage of the body of a yellow color, a clear white head and white tail.

The *Ruff* (*h*) resembles the jacobine; but is not reckoned so valuable. Its chain or *cravat* is not so large and perfect as the former.

The *Capuchin* is a variety which, like the jacobine, receives its name from an order of monastics.

The *Nun* (*f*) is so called from its having feathers springing out from the head in such a manner as to almost *veil* the eyes.

The *Roman runt* is one of the largest of the tribe, and has been bred principally for the table.

Of *Fan-tails or Shakers* (*i*) there are two kinds—the broad-tailed and narrow-tailed. The former is most prized. In the best specimens the tail is set very broad, and so high that the head almost touches it, when the bird stands upright. The body is of small size, and the variety possesses no particular attraction except from the peculiarity of its tail, which, by contrast, gives variety and interest to a group. The color is white.

The figures in our cut were drawn from specimens bred at Mount Hope, the residence of E. P. PRENTICE, Esq.

THE FARMER'S NOTE BOOK.

Seeding Grass Lands.

EDITORS CULTIVATOR—Having traveled over a considerable portion of the southern section of Michigan the past season, I was led to notice in particular, the general barren appearance of the land, excepting such as was covered with cultivated crops. In many places the field next adjoining a luxuriant crop of wheat, would be covered with thistles and briars. In fine, it seemed to me as if many of the farmers had determined to run a race, to see who should first succeed in running down their land.

Wheat each alternate year being taken from the soil without an ounce of grass seed ever being sown, or if sown, only in the most sparing manner, from 2 to 4 quarts being thought sufficient for an acre of ground. The consequence of this mode of management is such, that land which has not been more than twelve years cleared from its primitive forest, has, if not run out, become at least thoroughly run down.

Now I would say, that from observations made during a series of years, both in the New England States, and in other sections of our common country, in which it has been my fortune at different times to be placed, I have found that the most successful farmers were those who were the most bountiful of their seed, especially of their grass seed.

Many farmers even at the east, who have had the benefit of Agricultural Societies, and the practice of skilful and judicious neighbors near them, from whom they might improve, lose at least 25 per cent. from their pasture and meadow lands, by sowing their grass seed too sparingly.

An old proverb, from good authority, which will apply well to this subject, as well as many others, declares that "if ye sow sparingly, ye shall reap also sparingly;" in no case will this hold more true than with regard to the cereal grasses and grains. If every farmer who does not sow at least from 10 to 12 quarts of grass seed per acre, would this spring sow upon one acre double the amount he usually sows, and note the result in comparison with the rest, sown in his usual manner, I am satisfied that there is not one in ten of these farmers but would increase the amount of their seed for the future.

It is somewhat difficult to give the precise amount that should in all cases be sown; much depends upon the preparation of the land, quantity of barn-yard manure applied, if any, adaptedness of the soil to grass, &c. As a general rule for mixed grass, not less than one peck of timothy or herds-grass, and from 4 to 5 lbs. of clover, should be sown to the acre; in some cases more may be profitable, oftener more than less. In low moist lands one half bushel of Red-top, and 4 quarts of Timothy, will be found an excellent mixture. Enough in all cases should be sown to completely cover the surface of the ground the first fall, and thus in a great measure keep in check the noxious weeds, and supply in their place good wholesome food, which your stock will relish much better than the hard worthless stalks of the weeds and briars.

It is natural for land that is in a good condition, or even in a medium state of productiveness, to produce something; and if you do not cover the ground with seeds of your own choosing, nature will, and generally with worthless plants. We should recollect that since the fall of man, the natural products of the mother earth are thorns and briars, while she is ever ready to repay with interest whatever we may bestow upon her bosom.

The deficiency of grass seed sown in this region (southern Michigan) is lamentable. One man, and he considered as good as the average of farmers here, lately told me he had never sown a pound of clover upon his farm since he first commenced to improve it, 14 years ago. The consequence of this management has been the loss of tons of valuable feed, the loss of the manure which that feed would have made, and the loss of the vegetable portion of the soil, which would in a measure have been kept up by the decomposition of the roots of the grass, when the land was prepared for wheat.

Lands that have been managed in this way for 12 or 14 years, will not now produce over one half of what they first did; and it would seem as if the most of the farmers in this section must soon see the bad effects of a too excessive cropping, without a rotation at least of grass well and thickly sown.

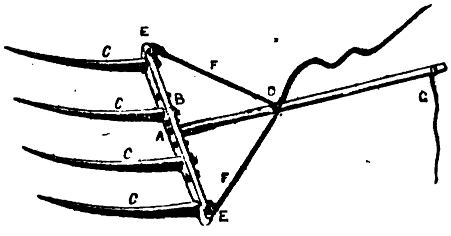
In conclusion, I will quote the old proverb—"As ye sow, so shall ye reap; if ye sow sparingly, ye shall reap also sparingly." Brother farmers, when you sow your grass seed this spring, do'nt forget the text, if it closes the essay instead of commencing it.

Hudson, Michigan. E. D. Pierson.

Pitching Hay by Horse-Power.

Having been a reader of the Cultivator for some years past, and having never seen any account of pitching hay by horse-power, I thought the following description of a fork which I have used for the last five years, might be of interest to your readers. The tool is a great saving of manual labor, especially where the hay has to be put up in high mows. It is simple in its construction, not liable to get out of order when properly managed, and can be made by our common mechanics at so trifling a cost as to put it within the reach of every farmer.

The fork may be described as follows: (fig. 38,) A is the head, 28 inches long, and 2½ inches square, of white oak, or some other strong wood. B is the handle, 5½ feet long, morticed into the head, with an iron clasp of band or hoop iron to fit tight over the head, and to extend six inches up the handle, secured by two good rivets through the handle, to increase its strength. *c c c c*, the prongs of the fork, made of good steel, and of the right temper, ½ an inch wide at the head, and drawn out tapering to the point. They are to be 20 inches long, 8 inches apart in the head, with a burr to screw them up tight, and a rivet on each side of the middle prongs, to keep the head from splitting. E E staples, riveted over the end prongs, to which the rope, F F is to be attached—the rope to be drawn together 3 feet from the head in the form of an A, and then the single rope to extend from that over a tackle-block, which is hung to a rafter at the peak of the roof of the barn, and 2 feet over the side of the mow, and thence to the bottom of the door-post, where another tackle-block is attached, under which the rope passes. G is a small rope, attached to the end of the handle, by which the fork is kept level as it ascends over the mow. As it approaches the place where the hay is to be left, the rope should be slackened in the hand, when the hay will tilt the fork so that it will discharge its load immediately. The fork, when loaded, is raised by a horse, which is attached to a swingle-tree to which the rope is fastened, near the lower pully or tackle-block abovementioned. When the hay is discharged from the fork, back up the horse and be ready for another fork-full. The fork is drawn back by the small rope. In this way forks-full can be picked up nearly as quick as they can be by hand.



Hay Fork—Fig. 38.

A farmer that has a large quantity of hay to pitch, will more than get pay for the trouble and expense of a fork of this kind in a single year. With the assistance of a boy to lead the horse to the fork, a man can with ease pitch off 6 tons of hay per hour, and pitch it from 15 to 20 feet high. On a trial of speed, I have pitched a ton 15 feet high in 4 minutes. The fork does not cost over $5 without the blocks and ropes, and I think they can be had altogether, ready for putting in operation, of Garret Brown, Newtown, Bucks County, Pa., for $7. A Practical Farmer. *Bucks County, Pa.*, 1848.

Culture of Potatoes and Indian Corn.

Eds. Cultivator—In your last number, I notice an article on the prevention of the potato rot, and I think that by pursuing nearly the same course for the past four years, has been the means of saving my crop during that time. I generally plant good sized potatoes, cut in two or four pieces according to size, and plant two pieces in a hill, about six inches apart.

One of my neighbors, the past season, planted the same kind that I did, only they were small, about a fortnight before I did, and dug about three weeks after. More than half of his are unfit to eat, while in mine not one in a hundred is affected. It is my opinion that the potato has become degenerated by using small and unripe seed.

Also, an article entitled "fertility of the subsoil," where a person raised ears of corn 22 inches long, on soil that was raised from a well, reminds me of some timothy I saw growing on soil that was thrown out in digging a cellar, some of the heads of which were nearly 14 inches long.

Below I give you an account of my corn crop for the past season, grown on seven acres of land. It was a part of the field on which corn was raised in 1846, an account of which you published in the last volume—one acre of the field, the last year, being planted to potatoes:—

Plowing,	6¾	days,.....	$6.75	1st hoeing,	15	days,..	$9.38
Harrow,	2	"	2.00	2d do	10½	" ..	6.50
Rolling,	½	"	50	Cutting up,	14½	" ..	9.00
Marking,	1	"	1.00	Husking,	54½	" ..	34.00
Planting,	9½	"	6 00	Drawing Stalks,	2	" ..	2.00
Cultivating,	4½	"	2.75				
							$80.88

At an expense of nearly $11½ per acre. We gathered from the field 20 loads of pumpkins, 1300 bushels of ears of corn, and 32 loads of corn fodder.

La Fayette, 20th Jan., 1848. E. V. W. Dox.

Stall-Feeding Cattle.

Editors Cultivator—While reading your remarks to correspondents, in the December number of the Cultivator, it occurred to me that I might give you something in the line of *an experiment*, from which one *fact* at least might be drawn, viz:—That it will not answer for a farmer who wishes to make money, living where hay and grain is as high as it is in most parts of Connecticut, to make beef entirely by stall-feeding, at ordinary prices. There is a profit in making beef, if it can be made mostly on grass, and many farmers think they can make it at a profit on grain; but there is not one to a dozen, after he has fatted a bullock, can tell how much he has given him. As he has got a heap of good manure, he guesses he has got his pay pretty well.

Experience, however, has taught me that it will not do to pay too much even for a good thing. In the experiment to which I allude, the prices of hay and grain are put low, or at what they would readily sell for at the barn; the beef at what it actually brought in market. I consider the manure an equivalent for the trouble. My aim in the experiment was accuracy, as near as possible. The hay was weighed three times per week to get an average; the grain and roots measured as given. I give the experiment as copied from my memorandum book.

Oct. 17, 1846.—Put up a pair of six year old oxen to fat—value as working oxen, $60—not saleable, being unruly; rather low in flesh, but perfectly strong and healthy. They were tied up in a warm but well ventilated stable; with light enough to see to eat well, and no more. Water was given them night and morning, as much as they would drink, varying from two to ten pails full per day. Most of the hay given them was cut in a machine, and wet up with their provender, to which a little salt was added daily. Their fattening qualities, judging from the handling, about a medium. They kept very quiet, lying down three-fourths of the time. Stables cleaned and well littered twice a day; oxen curried well once a day, and kept as clean as possible. Used about 3,000 lbs. of straw and stubble for litter.

The cattle consumed as follows:—

1st week—Hay 336 lbs—turneps 7 bushels.

2d week—The same.

3d week—308 lbs. of hay; 7 bu. turneps, and 1 bu. 24 quarts of provender—(corn ground with cob, worth 40 cents per bushel.)

4th week—Same as 3d.

5th week—280 lbs. of hay; 7 bu. turneps, and 1 bu. 24 quarts of provender.

6th week—280 lbs. hay; 10 bu. turneps, and 1 bu. 24 quarts of provender.

7th week—280 lbs. of hay; 10½ bu. turneps, and 2 bu. 20 quarts provender.

8th week—252 lbs of hay; 7 bu. turneps, and 7 bu. provender.

9th week—Same as 8th.

10th week—Same, except that the provender was half rye.

11th week—Hay and turneps same, and 7 bu. 28 quarts provender.

4 days of 12th week—144 lbs. hay; 4 bu. turneps, and 1½ bu. provender.

The oxen were slaughtered Jan. 7.

Cost of Oxen,		$60.00
3,280 lbs. hay, at $9 per ton,		14.76
88 bushels turneps, at 16 cents,		14.08
Provender,		20.40
Total expense,		$109.24
Beef, 1,592 lbs., at $5.87½ per 100,	$93.53	
Hides, 195 lbs. at 3 cents,	5.85	
Heads and plucks, less butchering,	62	
Total receipts,		$100.00
Loss,		$9.24

I would state farther, that through the whole time the oxen had as much hay as they could eat, and the last half of it as much provender; mixing it with hay prevented their sickening or cloying. Lozelle J. Platt. *Winthrop, Conn., Dec. 31st, 1847.*

Bread Making Machine.

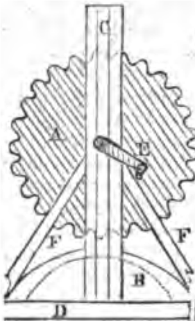


Fig 1—*End View.*

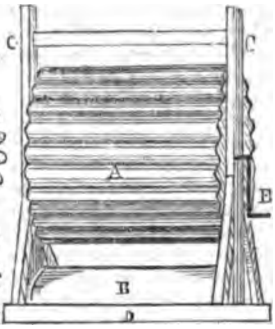


Fig. 2—*Side View.*

A, fluted roller; B, section of a larger roller; C, framework to support the roller; D, thick plank into which the frame is morticed;* E, crank of roller; F F, braces to frame.

Eds. Cultivator—Seeing in your last number of the Cultivator, a notice of a premium being offered for a bread making machine which should not exceed $5 in cost of construction, accompanied with a sketch of one by J. A. C., (which seems to me to be merely a common biscuit brake, such as is used by bakers,) I have been induced to send you the above drawings, of a machine which I have used in my family with the very best results, the bread being as effectually kneaded as it could be done by hand, and with this decided advantage—that you know that it is clean, there being no occasion to make use of the hands, even in the mixing of the dough; consequently you may make any of your servants do the work. The first thing to do is to provide yourself with a tolerable wide plank, into which have two upright posts or pieces of scantling, C, C, of suitable size, say 3 x 3, morticed, and which are supported by the braces F F. Into these have a fluted roller, A, fixed—the flutes should be deep, and not coming to a sharp edge, but rounded, as shown in the sketch. Below this roller, and fastened to a plank, should be the segment of a much larger roller, on which the dough is laid when passing under the fluted roller. In those I have used this has been fixed; but some may suppose a moveable roller below would answer best, in which case they can have one fixed, as shown by the dotted lines—a piece of ¾ inch iron passes through the fluted roller, forming the axle and crank, as shown at E. The whole is exceedingly simple, and can be made by any jobbing carpenter. The iron crank can be dispensed with, and the axle formed from a part of the roller, to which a handle can be affixed, as is done to grindstones. Such was the one I made use of at first.

And now for the operation:—Take a wooden bowl or tray into which mix as much flower and water, with the necessary quantity of yeast and salt. Stir this well together with a wooden spoon, adding more flour as required until it has become stiff and of the right consistency. Form it into a roll or loaf, and place it on the large roller, and commence turning the crank. This will of course carry all the dough through, kneaded by the flutes of the roller. It will also of course be elongated and flattened. Now double it over, and reverse the motion of the crank, and you will pass the dough back to the side from whence it first came. Continue this operation as long as you may deem it necessary. Then take it and form into one or as many loaves as the quantity may allow. Place it in pans to rise, and when risen bake as usual.

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* By being attached to a moveable piece of plank, it can be more easily put away; and when to be used, it can be fastened on to a table or dresser.

I have thus sketched what I believe to be the most simple bread making machine (considering its efficiency) that can well be made. I have had one in use for many years, and speak from a knowledge of its perfect efficiency and adaptedness to the work. The bread made by it cannot be distinguished from that kneaded by a regularly instructed baker; and one of its great merits is, that by varying the size you may adapt it to a small family or a large hotel: for I have tested it for this latter purpose, having been the proprietor of a fashionable summer retreat far in the interior, where I could not always procure experienced bakers, I had to contrive something to aid me, and after I had had one of them made I found no difficulty, for then the pastry cook also made all the bread, and the bread was always light, and there were fewer failures in making it good after I commenced using this machine, than when the hands were used in kneading it. The size best adapted to a small family would be a roller about 9 inches long, and from 10 to 12 inches in diameter; the space between the rollers may vary from 1 to 2 inches. By bringing them so close, and continuing the revolutions a length of time, you have all the effect of a baker's brake for biscuits, produced, and of course you may make most excellent biscuits.

This machine possesses, I believe, all the requisites required by R. W. Jr., for claiming the premium offered by him, being "an effective machine for kneading and mixing dough, that shall be simple in its construction, easily cleaned, to occupy a small space, durable, and not to exceed $5 in cost, for one to work 5 lbs. of flour at a time;" and I enter it, therefore, in competition with that described in the December number of the Cultivator. In fact, knowing its efficiency by actual trial for several years, I hesitate not to show it against even the very expensive one described by Loudon in his Encyclopædia of Architecture, &c. L. *South Carolina, Dec.* 20, 1847.

Rearing Lambs for Market.

At our request, Mr. GEORGE EDWARDS, of Mechanicsville, Saratoga county, has furnished us the following account of his mode of managing sheep and rearing lambs for market:

"As my farm is near our large markets, and well adapted to what I call *mixed husbandry*—that is sheep, grain, and grass—the soil a loam, high and dry—I find the rearing of fat lambs the most profitable branch of farming. The ewes have generally been bought in September—always selecting those of rather coarse wool, they being larger, and generally the best nurses. The rams (pure South Downs) are put to them early in November, and the lambs are dropped about the first of April. The ewes are fed during the winter with corn-stalks and straw, and about one month before lambing and from thence till they go to pasture, they are each fed with three quarts of brewer's grains per day.

"Last year, 100 ewes raised 100 lambs. The wool, which was sold at Troy at 32 cents per lb., brought $104.75. Twenty-five lambs sold at $2 each, one ram lamb $5, one do. $3, and the remaining seventy-three at $1.75 each. They were all taken away by the last of July. The ewes were sold to the butcher at $2 each in October—so that the hundred ewes realized $490.50.

"It is desirable to get rid of the lambs early, that the ewes may have time to fatten, so that they may be sold to the butcher in the fall—giving room for a new flock which should be bought in for the next season.

"It is a good mode, and one which we have frequently adopted, if we have a piece of rye which had been sown on a clover sod, (or where the land was otherwise in good order) to plow the stubble the very moment the rye is off the field, and sow turneps. The furrows are first harrowed with a light harrow, lengthwise, and then crosswise—the seed sown broadcast, 2 lbs. per acre—ending with rolling the ground with a very light roller. The turnep called the stubble turnep, is preferred. A larger quantity of seed is sown than some use, in order to get a good stand in spite of the ravages of the fly. I have now procured one of Emery's seed-planters, and shall probably sow the turneps in drills henceforth—the rows two feet apart, to give space to work between them with a horse and small plow, or cultivator. As soon as the turneps are up about two inches, we put on the light harrows, passing both ways, keeping a straight course. If the turneps are in drills, the drags are only run across the rows. About two days after the harrows are run over the turneps, they are gone over with hoes, and thinned where they are in bunches.

"Ten acres of turneps, with a tolerable even plant, will supply and fatten 150 sheep, and will afford fine keep for them from the first of October to the end of November, (if there is not much snow) at a time when pasture is generally short. About one acre should be fenced off to commence with, and after four or five days, add about one-fourth of an acre every other day. At first the sheep will appear not to like the turneps, but after three or four days they will eat them rapidly. A boy should be placed with the sheep for two or three hours each day, to chop up the shells—the sheep will fall back and eat them up clean.

"While the sheep are on the turneps, it is an advantage to give them a little cut hay in troughs—say about three bushels per day for 150 sheep.

"Let any man try this plan, and if his land is in good heart, he will not only find his sheep get *really fat*, but they will leave the land in fine condition for a spring crop. It must be observed, the more attention that is paid to keeping down the weeds, the better will the crop pay cost."

Red Root—(*Lithospermum arvense.*)

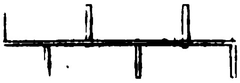
C. M. Stark, of Yates county, N. Y., says in the Transactions of the N. Y. Ag. Society, that 30 years ago the red-root was unknown in Yates county—now, it is so abundant, by neglect and increase, that hundreds of bushels are purchased at the oil mills at 19 cents per bushel; and if one dollar per bushel were given, the hundreds would be thousands. The ripening of this seed makes a tremendous draught upon the soil.

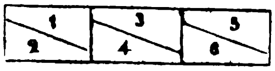
When first introduced, it may be cleaned out by careful, close, and constant weeding. This we know. But farmers generally will not do this till they have learned all the evils, and then it is too late. In such cases, it is proposed to eradicate it by a proper rotation. Plow once for wheat, 8 inches deep, to throw the seed too deep for germination, doing the rest of the work by the cultivator. Then, next autumn, plow the stubble the same depth, to bring up the seed, and harrow it; it will grow. The next spring, plow very shallow, or cultivate, and sow a spring crop. Again plow and harrow in the fall, cultivate in the spring, and plant corn as early as possible. This, if well tilled, will clear all growing weeds. Plow again early in autumn, the same way, and next spring sow some *other* spring crop. Then, seed with grass. The red-root, being a biennial, can hardly stand such a course.

To prevent carting seeds out with manure, it is recommended to thrash, and burn the wheat straw in a heap, on the field where it grew, looking to the straw of the spring crops to furnish manure. Then, keep a look out, especially near trees, for plants from seed dropped by the birds, which are to be carefully weeded out.

Economical Fences.

The following is a description of a kind of fences which I have tried considerably:—For posts I use 1¼ inch oak or hemlock plank, 2 inches wide at top, and 18 inches wide at bottom; 4 feet long, and set on 2 stones on top of the ground. It is 5 boards high, 3 of the boards being 6 inches, and 2 of them 5 inches wide, with a 5-inch board for a cap. The fence is straight, with half the posts on each side, thus breaking joints on each post. The boards may be 12 or 14 feet long. The fence has thus a base of 3 feet and an inch—the posts slanting and bracing in towards the top, which allows the plow to run close to them, and not interfere with the whiffle-trees. The fence will last as long as the boards, as every part is above ground. For fear of heavy pressure by unruly cattle, or the danger of being moved by high winds, I drive down, close to the slanting side of each post, a thin stake of oak, about one foot into the ground, and put a nail through it into the edge of the post, which makes it firm and secure. I put a two inch bat in front of each post, of inch board, which holds the boards from warping better than the nails alone. I make this kind of fence portable by using one post at one end, and one in the middle on the opposite side of a length, and on the other end a three inch strip of board, instead of a post, with two holes corresponding with two holes in the wide post on the first end of the next length, in which I put two pins connecting the lengths, and thus proceed. With this portable fence I enclose my stacks, confine my pigs on a small portion of my pea-ground, fallow, &c. I consider the economy of this fence such that I would not receive posts as a gift, and be under obligations to set them in the ground the usual way. I buy 1¼ inch plank, 20 inches wide, 12 feet long. Each plank is made into six posts by my wood saw running by horse-power. My bats are sawed by the same. I cut the plank for posts thus:—





Clyde, Wayne Co., N. Y. Jos. Watson.

Milking.

A writer in the Maine Farmer gives, from long experience, a number of rules for milking, most of which are very good, as—pare your nails short—sit on a stool—milk fast—never scold a cow—never get out of patience—tie her tail to her leg in fly-time, &c. But the following are objectionable: "wet the teats with the first stream of milk"—and "never strike a cow for running or kicking." Milk, applied to the teats to soften them, dries and forms a glossy varnish, which tends to cause cracking or chapping of these parts. Cold water is much better, becoming quite dry by the time the milking is finished, and leaving the teats clean and soft. Touching the striking of a cow—the rule applies well to ninety-nine cases in a hundred as now practiced—but judicious punishment will cure a cow amazingly quick. I speak from long experience. If a cow kicks much, place a switch under the left arm, the pail in the left hand, and if, while milking, she kicks, let it be followed invariably by a *single* blow. Never strike but once at a time, even if she kicks so hard as to break your leg—and never omit it, if she hits nothing. Soothe her at all other times. In this way she soon finds what the whip means, and shapes her conduct accordingly. A small mess of pleasant food at the time, will serve to do away any disagreeable impression in connexion with milking. By never striking but once, she has not time to "get mad," and it is all the more terrific, for who cares for a blow while stimulated by fury?

I have found some "hard cases" to deal with, but completely cured them all with a single exception. There was one old cow, so terrific in the blows she dealt out, that none dare attempt her with a pail, till her legs had been strongly secured, which was done with great difficulty. She never kicked, after I had given her the second milking, in the way I have just stated, but became perfectly mild, quiet, and gentle, having doubtless been made vicious by bad management. The case which I could not cure was a large, uncommonly knowing cow, who was wise enough never to kick when *I* milked her, consequently I could not apply the remedy, but was savage enough to other milkers. With regard to cows running about,—I once knew a cow quite troublesome in this particular, usually upsetting the pail of milk, before commencing a race. The boys chased her round the pasture till they cornered her, and then lashed her vigorously. As a consequence, she took care not to be cornered next time, and hence became intractable in the extreme. To cure her, she was placed in a moderate-sized yard, and driven gently into a corner. When she ran, the whip was applied, but with only one blow at a time, till she regained the old corner, where every means was used to quiet her. In this way she soon found an intimate connexion between whipping and running, and that comfort consisted in sticking to her post. On the third day she was handed over to the care of the hired man, and ever after was a quiet cow.

It is almost needless to add that this mode of treatment requires perfect calmness, patience, and self-possession. When you feel passion or fear, the animal soon discovers it, and she feels no longer the influence of a superior being. Therefore those who cannot carry out the system properly, had better not try it.

An Old Milker.

Shallow Plowing and Surface Manuring.

We make the following extract from a letter from a Maryland subscriber:—If you looked at the Farmer, you saw I got the first premium for wheat and corn—Wheat 41 bushels per acre—Corn 63 bush. per acre—and for plowing, at our cattle show in 1847. I had taken some pains to prepare the lot for the wheat, and as I stand nearly alone on shoal plowing, I was the more particular. I prepared a part of the lot with *Sinclair's* 3-mould plows, and the common drag harrow, and have never seen as good White wheat in the winter, during my farming; and nearly every one that has seen the wheat, which I have growing from 22 bush. seed, has pronounced that they hardly ever saw as good in the winter; few crops look well in our part of the country; I have seen but 2 or 3 in my travels. I am well satisfied, if surface manuring is true, which I think will not be denied, that to keep the richest portions of your earth nearest the surface, must be the true interest of every farmer. I find that all men who give their manure to the top of the land, when in grass, will not hesitate a moment to say that they prefer the plan of putting their manure on top; that is to say on grass the year before they cultivate, or on the land after they have broken it up in the spring for corn, or as a top-dressing on wheat, after seeding; all of which must be rotted manure, except for corn, or there will not be the same benefit.

In the year 1834 or 1835, I ordered my driver to take to my corn lands, manure ten with rotted manure before plowing, and ten after planting; also ten with unrotted before plowing, and ten after, and alternate them, to see which would produce most corn—land equally good. After the corn got three feet high, I told him to have it suckered. I inquired if he found any difference; he informed me the rows manured on top had four or five times as many suckers, which was the first thing that gave me the idea of top-dressing land. I regret I did not gather and measure; but I forgot to give the order.

I shall continue to plow from two to four inches, and I think if I have as good luck as I have had, that I shall not change, though I shall give some efforts in good land a little deeper. One thing I will mention: if you will take a deep, rich black mold, and take off one or two inches from a few lands, and put it in another place, you may put what you please in land, and nothing will grow equally good as in the rows which are in their natural state; but do you continue the manure, and after some years exposure they will come to produce well. So in this case, I draw the inference that sun and light are *first* all important. I like to go down with such implements as will not take down the top or bring up the bottom, and for this reason, in excessive hot weather the roots of plants desire to protect themselves from the heat, and in very wet weather I like the water to have a chance to settle quick.

Interesting Experiments.

Adam Clark, of Milo, Yates county, N. Y., in a communication to the Gen. Farmer, gives the result of an experiment, which is worthy the attention of all wheat raisers. Four pieces of ground, each 2 feet square, of finely prepared ground, were planted with wheat, a grain each at the intersection of straight lines drawn across each plat. The experiment and results we have condensed in the following table:

	No. 1.	No. 2.	No. 3.	No. 4.
Distances of seed asunder,	1½ in.	3 in.	4 in.	4 4-5in
Number of grains planted,	289	81	49	36
Number of grains that grew,	203	60	40	30
Number of heads,	286	136	112	104
Average number of grains per head,	26	35	39	42
Whole number of grains,	7458	4765	4452	4399
Yield per acre in bushels,	108	69	64	63
Seed per acre, in bushels and pounds,	4 bu. 12 lbs.	1 bu. 10 lbs	42¾ lbs	31½ lbs

Fat Animals.

The Centre market at Albany presented a display of very fine beef, mutton and pork, on the 22d of February.

At the stall of Mr. Kirkpatrick was the beef of a heifer, in relation to which, as she was considered a very superior animal, we have thought proper to collect some particulars. Mr. Wm. J. McKown, of Waterville, Oneida county, who fattened her, states that she was raised by Mr. Wm. Hays, of Sangerfield, in the county before mentioned, and was calved the 27th of March, 1844. That she was got by a full blood Durham bull from Mr. Weddle's stock which was sent by Barnabas Allen of Wayne county, to Stephen Leonard of Sangerfield. That her dam was got by a three-fourths bred Durham bull, from Mr. Weddle's stock, bred by Mr. Spear of Palmyra; her grand-dam a "native mouse-colored" cow, said to be of an excellent *family*. The heifer never bred. Her dam has produced several other calves, all of which have been killed for veal, and were remarkable for their fatness and symmetry. The sire of the heifer was chiefly noted for the value of his progeny for dairy purposes—his owner, Mr. Leonard, having raised several cows by him, that were superior milkers.

The heifer was raised in the ordinary way, (not allowed to suck,) and had milk but for a few weeks. She attracted no particular attention till the fall after she was two years old, when she had become so fat on grass, that it was determined to sell her for beef. Mr. McKown bought her the last of September, 1846, intending to slaughter her in a few weeks; but on feeding her for a short time with pumpkins, she gained so rapidly and showed such a strong propensity to fatten, that it was resolved to keep her a longer time. From the first of January, 1847, she had two quarts of meal per day, till the first of October; being fed in other respects like the dairy cows, with which she ran. From October till she was slaughtered, she was full fed with pumpkins, carrots, and corn and cob meal. She was killed on the 19th of February, 1848, at which time her weight was as follows: Live weight—1492 lbs. Dressed weight—quarters, 984, tallow 157, hide 67=1208 lbs.[*]

At the stall of Mr. James McQuade, was the beef of a fine pair of twin cattle, fattened by Mr. Sherman Bassett, of North-East, Dutchess county. They were four years old, (coming five this spring,) were said to have been raised in Connecticut. They were called of "native" breed. Their color was a handsome brindle; but their shape and general character, strongly denoted a strain of Devon blood. They had been fed about a year, but the particulars of feeding we did not learn. Their dressed weights were as follows: *Near* ox, quarters, 1062, tallow 188, hide 80=1330 lbs. *Off* ox, quarters 1072, tallow 180, hide 84=1336 lbs.

Mr. D. Mahoney had the beef of four very good oxen, fattened by Mr. C. Leach, of Madison county. We only obtained the weights of the quarters of these cattle, those of one pair of which weighed 2746 lbs., and of the other 2304 lbs.

Mr. J. Featherly had the carcass of an extraordinary calf, fattened by Mr. Woolford, of Albany. It was a few days less than three months old, and its dressed weight was 302 lbs. It was a mixture of Durham and Devon blood.

A very large and well shaped hog was shown at the stall of Mr. Geo. Schwartz; it was said to be but eighteen months old, but it weighed, dressed, 728 lbs.

Mr. Kirkpatrick had the carcasses of seven Leicester sheep, fattened by Harry Felt, of Madison county, the dressed weights of which were from 88 to 115 lbs. The saddles of most of these were sold to go to Virginia, and brought about twelve cents per pound. Mr. McQuade had also some very fine mutton, but we did not learn the weight.

Agricultural Discussions.

In our last, we gave a brief sketch of the discussions which have taken place at the weekly meetings held at the Capitol in this city. The subject of the culture of fruits was taken up at the fifth meeting, and occupied two evenings. The meetings were fully attended, and the discussion elicited remarks from many cultivators and amateurs. We shall endeavor to find room for a more extended notice of this discussion in a future number. The following resolution was unanimously adopted:

Resolved, That we deem it most for the interests of farmers, mainly to cultivate approved varieties of fruit of our own country; and that we approve of the varieties recommended by the State Agricultural Society, at the annual meetings of 1847 and 1848, and commend them to the notice of cultivators.

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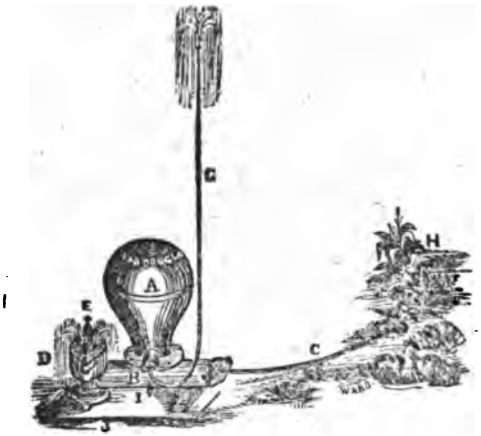
[*] There is a table which was published several years since in England, for ascertaining the dressed weight of cattle by external measurement: The girth of the beast is taken at the smallest part, immediately behind the fore legs, and the length from the point of the shoulder to the end of the rump. From these measurements, the table purports to show the weight of the beef, or four quarters. We are not aware that the table is much used in this country. Its correctness appears to be doubted. Some contend that it gives too much, and others that it gives too little dressed weight in proportion to the dimensions. The heifer was tried by this rule. Her length from shoulder to end of rump was 5 ft. 2 in. and her girth 7 ft. 4 in. According to the table, her quarters would have weighed 946 lbs. Their actual weight was 984 lbs. But as this animal was of uncommon fatness, and her flesh of unusual thickness, she can hardly be deemed to form a fair test of the correctness of the table, which for cattle in general, it is by no means improbable, is sufficiently accurate.

The next discussion related to the manufacture of Butter, &c. Mr. Johnson, the secretary of the Society, gave some very valuable and important information in regard to the quantity of butter manufactured in the different counties of this State—the qualities of the different kinds of salt used—and the course pursued by our government in making contracts for the supply of butter for the army and navy. Mr. J.'s remarks will appear in the *Transactions*, and we shall take the earliest opportunity to put our readers in possession of some of the important facts which he has collected.

Improved Hydraulic Ram.

The annexed cut represents W. & B. Douglass' Improved Hydraulic Ram, manufactured at Middletown, Conn., for which a silver medal was awarded by the American Institute, October, 1847, and also a premium by the Middlesex County (Ct.,) Ag. Society, October, 1847.



H spring or brook. C drive or supply pipe, from spring to ram. G pipe conveying water to house or other point required for use. B, D, A, E, I, the ram. J the plank or other foundation to which the machine is secured.

Water-rams, variously constructed, are fast coming into use, and with great advantage. We copy the following description of them from the Middletown, Ct., Constitution:—"Its object is to raise water above its natural level, which is done by a simple hydrostatic principle. If a bar of iron be made to stand upright, it will press with its whole weight on the point on which it rests; but if a column of water be poured down a perpendicular tube, it exerts a force not only downward but laterally, so that it would have a tendency, if the tube was closed at the bottom, to expand at the bottom of the tube into a globular form, by pressing on each side equally. If the tube be very long it must be capable of resisting a great pressure at the lower end or it will burst. If now a smaller pipe be made to connect with this tube at the bottom, and a stop cock be placed at or near the point of junction, the pressure of the water will be very great at the place where the stopcock is. If the cock be suddenly opened, so great is the pressure that a jet of water will rise in this pipe to a considerable distance above the top of the other pipe. If the cock be opened and shut successively, a continuous stream is obtained from the smaller pipe. This is the simple principle of the Water-Ram. Messrs. W. & B. Douglass in this city, are manufacturing a very perfect article, which takes but little room, acts with great force, and seldom gets out of repair. It has obtained quite extensive use among the farming community. Springs of excellent water, before of no utility because at a distance from where they might be used, and at too low a level for ordinary conveyance through pipes, are now brought into requisition for household purposes, for watering cattle, and also for irrigating lands." [See advertisement.]

Lawrence Scientific School.

This Institution forms a department of Harvard University, Cambridge, Mass.—a department endowed by the munificence of the Hon. Abbot Lawrence. The second term commenced on the 25th of February last. From a circular forwarded us by Prof. Horsford, we learn that instruction will be given under the following heads:—1. *Chemistry*, under the direction of Prof. Horsford, who will receive special students in chemistry, they giving their attendance in the laboratory for such time as shall appear to be necessary. In the course of the term Prof. H. will deliver a full course of lectures on theoretical and practical chemistry. 2. *Zoology and Geology*. Prof. Agassiz will deliver a course of lectures "on the History of the earliest Geological Ages," followed with an account of the earliest known condition of our globe, and the changes it has undergone up to the present period. The regular lectures in future will consist alternately of zoology and geology. Prof. Agassiz will afford students access to his laboratory, in order that they may learn how to observe isolated facts, and how to conduct investigations in a proper manner. He will also make excursions in the country with the students during term-time. 3. *Engineering*. This department will be brought into operation as soon as practicable.

The following courses of lectures delivered to undergraduates will be open to members of the Scientific School, viz:—A compendious course on *Minerology* and *Geology*, by Prof. Webster. A course on *Systematic Botany according to the Natural System*, by Prof. Gray. A course on *Natural Philosophy*, by Prof. Lovering. A course on the *General Outlines of the Classification of the Animal Kingdom, and on comparative Anatomy and Physiology*, by Prof. Jeffries Wyman.

We learn that the new Chemical Laboratory and the building for the department of Engineering are in progress of erection. It is expected that the former will be ready for occupation by September next. The formation of a Museum of Natural History, on an extensive scale, will be immediately commenced under the superintendence of the professors in the several departments. The Mineralogical Cabinet of the University, the Rumford and Philosophical Apparatus, the Anatomical Museum, the Botanic Garden, the Observatory, and the Public Library, will be accessible to the students of the Scientific School.

Further information on all subjects connected with the school, may be obtained on application to Prof. E. N. Horsford, Dean of the Faculty.

Cubic Feet and Bushels.—Divide the number of cubic feet by 1·6, and the result will be heaped bushels—applicable to apples, potatoes, &c. Multiply the cubic feet by the fraction 4-5, and the product will be stricken bushels.

Lawsuits.—The Chinese call going to law, "losing a cow to win a cat." With us it is often losing the cow without winning the cat.

An Old and good Maxim for Drivers:

Up hill urge me not,
Down hill press me not,
On the plain spare me not,
In the stable forget me not.

Answers to Inquiries.

Back Volumes of the Cultivator.—In answer to several inquiries, we state that we can supply orders for any or all of the back volumes of "The Cultivator." The first series, consists of ten vols. quarto, price, stitched, $1 per vol. New series, four vols. now complete, stitched, $1 per vol. The usual discount to agents.* These vols. can any of them, be always obtained, bound or unbound, of our agents in New-York, Messrs. M. H. Newman & Co., booksellers, 199 Broadway.

Manner of spreading Lime.—E. H. O., Petersburgh, Va. Lime is sometimes taken from the kiln in carts, laid on the field in small heaps, and covered slightly with earth; in which situation it remains till it has slaked and become thoroughly fine, when it is spread with a shovel. In other cases, it is allowed to become considerably slaked before it is carted, and is spread over the field immediately from the cart.

Composition for Grafting.—S. F. C., Philadelphia. See an article under the horticultural head in our last number.

White or Ox-Eye Daisy.—(*Chrysanthemum leucanthemum.*) L. S., Fredonia, N. Y. The seeds of this plant will vegetate after having passed through the bodies of horses or cattle, and it would not, therefore, be advisable to use manure made from hay which contained the seeds, unless great care was taken to destroy the plants as soon as they could be readily found.

Quantity of Carrot seed for an acre.—A. F., Hudson, N. Y. The quantity of seed required for an acre, depends on the width between the rows; the usual width is about sixteen inches; and when sown with a good machine, about one pound is sufficient for an acre. It may be had at the Albany Agricultural Warehouse, at a dollar and twenty-five cents per pound.

"Do Oyster-shells contain Posphate of Lime?" D. G. Washington, D. C. The quantity of posphate of lime is very small, not exceeding one per cent. They, however, form an excellent application for fruit trees, on many soils; but if the posphate of lime is especially required, it would be better obtained by the use of bones. The bones or shells would be more immediately useful if they were reduced to small pieces.

Work on Goats.—J. W. O. We do not know of any separate work on goats. They are spoken of in several works on agriculture; and Loudon describes the various domesticated species, and their uses.

Lead pipes for water.—The inquiry is often made whether lead pipes or tubes used for the conveyance of water, impart to the water any injurious quality. The conclusion generally prevails, among those who have investigated the matter, that lead is not entirely safe, so far as regards the purity of the water. Dr. Holmes, in a late number of the *Maine Farmer*, has given an article on this subject, from which we gather the following: that perfectly pure water in lead, causes the formation of an oxide of lead, which dissolves and the water becomes poisonous: that all the salts of lead are poisonous when taken into the stomach: that the oxides readily form combinations with acids and alkalies, which are deleterious to those who may swallow them, whether in solution or otherwise.

Sometime since we received an inquiry in relation to the cause of the decay of lead pipe, when placed in the ground and used for conveying water. It was said the pipes soon became thin, that holes were formed in them which rendered them worthless. By the above reasoning, it may be seen that the decomposition of the pipe may be owing to its oxidation from the action of the water, its particles becoming dissolved and carried away by the current.

Clay Pipes for Draining.—C. A. K. Parma Centre, N. Y. We are not apprised of clay pipes of the kind described by Prof. Norton, being made in this country; but we are informed that measures have been taken to introduce a machine by which they are made, and commence the manufacture of them.

Sowing Buckwheat with Wheat.—T. H., Colchester, Canada West. We cannot see how the ravages of the Hessian fly can be prevented by buckwheat being sown with wheat. We can imagine no quality in the buckwheat that would repel the fly and certainly the fly could not live in the buckwheat. We should therefore, attribute the exemption of the crop to which you refer, to accident, and not any influence of the buckwheat.

Downing's "Fruit and Fruit Trees."—J. H., Ottawa, Ill. The price of this work, with colored plates, is $15; that of the common edition, $1.50. The latter contains the outline figures of fruits, but no plates.

Osage Orange.—M. D. Jr., Lynchburgh, Va. The seeds of this plant are advertised by M. B. Bateham, Columbus, Ohio, at $2 per quart. We do not know of any *new* seed for sale here. Abundance of young plants may be had in this vicinity at $12 per thousand.

Cotswold and Leicester Sheep.—L. F., Waynesboro, Va. We cannot say who has sheep of these breeds for sale in this neighborhood. Persons who have them would do well to inform us.

J. F., Urbana, O. We can send any of the back vols. of the *Cultivator* in sheets, without stitching.

Cheese.—In answer to various inquiries, we will give an article on this subject next month.

Ide's Cultivator.—In answer to an inquiry made sometime since in regard to this implement, Mr. Nathan Ide writes us that it will effectually destroy "wire grass," Canada thistles, and other noxious plants, if it is properly used. He states that he has now a good wheat field, where the wire grass had entire possession a few years ago—it is now perfectly clean.

"White Black-berries."—Mr. Geo. A. Mason, of Jordan, N. Y., informs us that this kind of fruit is quite common in his neighborhood.

Supposed injury to hogs by Buckwheat.—Mr. S. Ruckman, of Highland county, Va., writes us that he lost several hogs last fall, while they were feeding on the "tailings" left after cleaning buckwheat, and he wishes to know whether the experience of others would justify the belief that the hogs died in consequence of any injurious effects from the substance mentioned. We should like to hear the remarks of others, but in the mean time would observe, that we should be inclined to attribute the injury to the *dust* which the hogs probably inhaled while working over the refuse. We have known similar results from hogs being allowed access to the chaff of oats, barley and rye.

Price of Guano.—W. H., Machias, Me. We understand the price of guano in Boston, would be from three to five dollars per hundred, according to quality.

Bones with Sulphuric acid.—W. H. We have not heard of bones having been prepared with sulphuric acid in this country; but in England they are much used for manure when decomposed in this way, and for *immediate* effect are considered better than when only crushed.

Other inquiries will be answered next month.

India Rubber Horse Collar.—This is a new invention, consisting of India rubber inflated with air. It is said to fit easier on the horse's neck than anything yet made.

In *New South Wales*, according to foreign papers, more than 350,000 cattle and sheep have, within the last two years, been boiled up for their tallow.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from C. F. Wells, C. E. G., Andrew Bush, S. W. Jewett, C. W. Mulford, Claudius Allen, Thomas Andrews, Vermont Subscriber, F. Holbrook, E. D. Andrews, J. Hildreth, E. D. Pierson, Dan. Gold, L. S., Jona, Bowers, Wm. R. Prince, Nathan Ide, Chas. Betts, Dean, James Otis, F. E. Stowe, James Jenkins, E. M. Hoyt, A Subscriber, I. Hildreth, W. Ansley, C. E. Goodrich, David Sinclear, Jr., Thurston Wood.

Books, Pamphlets, &c., received since our last, as follows: A **Universal History** of the most remarkable events of all nations, No. 1, and **The Children** at the Phalanstery, a familiar Dialogue on Education, by F. Cantayrel, from the Publisher, W. H. **Graham**, New-York.——**Public Documents** from Hon. J. I. **Slingerland**.——Address of Prof. **Shepard** before the Agricultural Societies of Hampshire, Franklin and Hampden counties, at their last Fairs, from **Sidney Chapin**, Esq.——**Report** of the Ohio State Board of Agriculture, for 1847, from M. B. **Bateham**, Esq. Ed. O. Cultivator.——**Illustrated** Life of Gen. Scott, from the publishers, A. S. **Barnes** & Co. N. Y.——**Transactions** of Trumbull Co. (O.) Ag. Society, for 1847, from F. E. **Stowe**, Esq.——**Agricultural Reports** of the Rhode Island Society for the Encouragement of Domestic Industry, from **Jno. Wilson Smith**, Esq.——**The Northern Whig**, Belfast, containing the annual report of the Royal Society for the promotion and improvement of the growth of Flax in Ireland. from Mr. **John Roberts**.——**Report** of the Trustees of the N. Y. State Library for 1847.——**Report** on Plank Roads to the Council of Wisconsin, by Hon. P. **White**.

☞ The gentleman who purchased a copy of the Transactions of the N. Y. S. Ag. Society, at the office of the Cultivator, on the 28th of February, will have $2 returned to him if he will furnish us with his address. The boy who sold it, made a mistake of $2 in the price.

New-York State Agricultural Society.—The premium list for the present year has been published. It is on a more extended scale than any heretofore offered by the Society—the amount of the premiums being upwards of $6000. We had intended to have published the list in our present number, but in the crowd of articles that is pressing upon us, it is impossible to spare so much room as the list would occupy. It has been published in one or more of our city papers, and copies may be had by application to the secretary, B. P. **Johnson**, Esq., Albany.

The next exhibition, as we have before stated, is to be at Buffalo; and we are pleased to learn that the citizens of that city and vicinity are already engaged in making the most liberal provisions for the occasion; both as regards the accommodation of visitors, and the means for forming the largest and most interesting show ever held in the State.

Ball Seminary.—An advertisement in regard to this institution will be found in this number, to which we would call attention. The school has been in operation for several years, and from the information we have received, and our acquaintance with one of its principal founders and managers, we have great confidence in its character and usefulness. It will be seen that arrangements have been made to give instruction in reference to agriculture and the arts, in the form of lectures illustrated by apparatus and experiments. This department will be under the charge of Hon. L. C. **Ball**, a gentleman who has been for two years engaged in chemical investigations in the laboratory of Prof. **Emmons**, and who, to eminent scientific knowledge, unites sound practical judgment. He is fitting up a proper laboratory, for the analysis of soils, rocks, plants, &c., to which the students of the school will have access. In connection with instruction in reference to the principles of chemistry and geology, Judge **Ball** will give, also, such practical information in regard to the details of husbandry, as will be calculated to render his pupils *successful farmers*. The seminary is located in a pleasant neighborhood, distinguished for its healthfulness, beauty of scenery and fertility.

Fine Mutton.—We acknowledge the reception of two legs of excellent mutton, from Mr. J. McD. Mc **Intyre**, of this city. Mr. McI. has been for some years distinguished as a breeder of superior Cotswold and South Down sheep, and has been a frequent and successful competitor for the prizes of the New-York State Agricultural Society, and the American Institute. His fat sheep have been for a few years past, mostly sold to feed the epicures of Boston, and have brought an average price of from eight to ten dollars per head. He lately slaughtered two fine sheep, two years old, a cross of the Cotswold and South Down, which weighed dressed, with the head on, 110 and 100 pounds. Mr. Mr. McI. has only bred a few sheep of this cross for an experiment; but so far, he has found them to fatten with greater rapidity at an early age than any others.

Superior Apple.—Mr. **Ambrose Stevens** of New-York, lately left with us a specimen of a variety of apple obtained by him in Washington, D. C., and called there the "*Virginia Pippin.*" It was grown, as Mr. S. understood, in the valley of the Rappahannock. It seems to us an apple of very excellent quality—not inferior to any within our knowledge. We defer for the present, a particular description; and would be greatly obliged to any of our Virginia friends, if they would tell us any thing in regard to the origin of the apple, (or one known by this name,) and the estimation in which it is held where known.

Large Sheep.—In our October number for last year, we noticed a couple of long-wooled rams exhibited at the State Fair at Saratoga, by Mr. C. B. **Reybold**, of Delaware city, Del. Mr. R. informed us at Saratoga, that the weight of his rams, at the last time they were weighed, was 320 and 288 pounds. In a letter received from him under date of February 22, last, he says: "I weighed the two old rams this morning. They weighed 344 and 288 pounds."

The Horse "Norman," or "Morse's Grey."—This horse, so well known as the sire of fast trotters, and valuable carriage and road horses, has changed owners. He has been purchased by Mr. I. T. **Grant**, whose advertisement will be found in the present number. We have no hesitation in saying that mares sent from a distance will receive all proper care and attention.

Curing Hay.—Mr. **Charles Betts**, of Redford, Mich., writes: "I learned from the Cultivator how to cure clover hay in cock. Taking the hint. I adopted this plan in curing all hay—timothy, red-top, &c.—and it is now almost as green as when cut. It has a sweet odor, and does not smoke when it is stirred."

Multicole Rye.—All the accounts of which we have heard concerning the produce of this kind of grain in this country, represent it as far preferable to the common rye. **William Massie** states, in the *Southern Planter*, that he obtained half a gill of it in 1845, from which he obtained, the first year, just one bushel. This bushel was sown in 1846, on an acre and three-fourths of ground, and produced forty-five and a-half bushels. The soil was of only medium quality in both cases, and received no manure. He thinks this variety of rye will prove a very valuable acquisition to the rye growing region of Virginia—the common rye having ceased to be valuable there. Five-eighths of a bushel, he thinks is enough to sow on one acre, as it tillers very much.

Stilton Cheese.—At a late meeting of the Executive committee of the N. Y. State Ag. Society, the president, L. F. **Allen**, Esq, presented a specimen of this variety of cheese, manufactured by Mr. **Henry Parsons**, of Guelph, Canada West. It was pronounced by all who exam'ned it, of superior quality.

Fat Cattle.—A lot of thirty-four beef-cattle, owned and fattened by Col. J. M. **Sherwood**, of Auburn, passed through this city on their way to Brighton market on the 20th ult. They were a prime lot, and several of them were of extraordinary fatness. The live weights of some of them were as follows:—1 pair oxen 6 years old, 2,170 and 2,336, equal to 4,506 lbs.; 1 pair 6 years old 2,100 and 2,040, equal to 4,140 lbs.; one pair 5 years old, 2,012 and 2,106, equal to 4,118 lbs.; one cow 6 years old, (very fat,) 1,708 lbs. Most of these cattle were grade Durhams—the cow was half-blood—got by Col. S.'s bull Archer. There was a pair of very handsome grade Devon steers—nearly full blood. The lot comprises about one-third the number fattened by Col. S. the past winter—the remainder will be taken to market soon.

Norman Horse Louis Philippe.—Mr. R. B. **Howland**, of Union Springs, Cayuga county, N. Y., has lately purchased this young stallion. He was bred by **Edward Harris**, Esq. of Moorestown, N. J., and was foaled in 1843. His sire ("*Diligence*,") and dam were imported from France by Mr. **Harris**. He is a very staunch colt—close-jointed, with very large sinews and well developed muscles—and his parts form a general combination indicative of great strength and power. His girth immediately behind the withers is 6ft. 3in.; measure round the hock twelve inches; below the knee ten inches. His weight, on the scales at the depot at the Boston Railroad, was 1120 pounds. We think this animal is calculated to produce a useful stock of horses for farm use, and we trust Mr. **Howland** will be remunerated for the great expense and trouble he has incurred in procuring him. We expect to have a cut and more particular description of this horse in our next number.

☞ Breeders of Horses in Central New-York, are referred to the advertisement of the Morgan Horse "**Gen. Gifford**," in this number.

Preservation of the Tomato.—Several correspondents request information in regard to the best method of preserving the tomato, in such a manner as to retain the greatest amount of its natural taste and virtues. We should like to know what methods have proved best.

Connecticut Pigs.—A Connecticut paper states **Ralph R. Phelps**, Esq., of Manchester, sold six pigs last spring, the average dressed weight of which, at an average age of nine months and nineteen days, was 378 2-3 lbs. The separate weights were as follows: one at nine months and a half, weighed 345 lbs; two at ten and a-half months, 700 lbs.; one at nine months, 375 lbs.; one at nine months and fourteen days, 412 lbs.; one at 9 months and thirteen days, 440 lbs.

Good Crops of Corn—Mr. **Wm. Bean**, of Jeffersonville, Pa. informs us that **John Miller**, of that neighborhood, raised last year, 94 bushels of corn per acre, and that others in the vicinity raised from 60 to 80 bushels per acre. He says—"a spirit of emulation has been awakened among us, and a general benefit will result to the agricultural community in this district."

Fat Sheep.—We learn that thirty-six sheep, fattened on the farm of Messrs. **Goodyear**, in Cobleskill, Schoharie county, sold for $380—or $10.55 per head.

French Guano.—A sample of the French Guano, advertised by Mr. **Bommer**, may be seen at this office. Mr. B. proposes to establish a manufactory of this manure in New-York.

Quick Growth.—The *Mass. Plowman* states that Mr. H. **Joy**, of Townsend, Vt., lately brought to Boston a pig, seven-eighths of the Suffolk breed, six months and eight days old, which weighed in Fulton market, *three hundred and two pounds*.

☞ Quite a number of communications, intended for this number, are unavoidably laid over to next month.

Notices of New Publications.

Report of the Ohio State Board of Agriculture.

We are indebted to M. B. **Bateham**, Esq., for a copy of the Second Annual Report of the Ohio State Board of Agriculture. It affords evidence that the agriculture of Ohio is steadily improving. The crops of last year, with the exception of wheat and potatoes, are represented as having been unusually abundant, and having been sold at remunerating prices. The wheat crop of 1847 is reported as one-fourth to one-third less than that of 1846, but the quality of the last year's crop is spoken of as superior. Indian corn is reported as a very large crop—much larger than usual. The Cincinnati *Chronicle*, in reviewing the report, estimates the wheat crop of 1847, at 16,000,000 and the corn crop at 55,000,000 for the entire State. Potatoes suffered from the disease and the general crop was light. The report states that no useful conclusion has been reached in reference to the disease, except that early planting has proved most successful.

The number of sheep in the State, according to the returns from the different counties, is 1,071,037; and it is computed that there were exported from the State in 1847, 1,933,435 pounds of wool.

The export of cheese from the State, was chiefly from five counties—Trumbull, Portage, Geauga, Madison and Ashtabula, and the amount from these was 11,450,000 lbs. The export of butter from nine of the principal dairy counties, is put down at 1,020,000; and the *Chronicle* estimates the export for the whole State, at 4,000,000 lbs.

The Architect; a series of Original Designs for Domestic and Ornamental Cottages, connected with Landscape Gardening, adapted to the United States; Illustrated by Drawings of Ground Plots, Plans, Perspective Views, Elevations, Sections and Details. By W. H. **Ranlett**.

Our readers will recollect a previous notice of this work, while the first volume was in course of publication. That volume is now completed, and the first number of the second is before us. It is a beautiful and highly useful work, and is calculated to be greatly beneficial in the dissemination of correct architectural information. The conductor remarks that "the work is intended as much for the million as for the wealthy few." He adds,—"Men of moderate circumstances and the really poor have been so long accustomed to plain, uncomfortable houses, that beauty and convenience have come to be regarded as solely the right of the wealthy and independent. We trust that some thing has already been done in the preceding numbers of this work to dispel such a degrading delusion. The humblest cottage should in beauty of form and convenience of construction, be equal to the finest villa, and the laboring man may, without extra expense, be sheltered by a roof constructed upon the same principles of architectural beauty as that which shelters his wealthy employer. As the sun shines, the rain falls, flowers blossom, the stars twinkle, and birds sing for all, so are the discoveries of science and the progress of art for all. If it were the sole purpose of the architect to construct showy houses for the rich, and if his arts were not to be employed in embellishing the dwellings of the poor, as well as in rearing splendid churches and spacious mansions, his noble profession would lose half its dignity."

The **Architect** is published monthly at the Tribune Buildings, New-York, at fifty cents per number.

The Western Journal of Agriculture, Manufactures, Mechanic Arts, Internal Improvement, Commerce and General Literature.

We have received two numbers of a publication with the above title, published at St. Louis, Mo., by M. **Traver** and T. F. **Risk**. The design of the work is expressed by its title. The numbers before us contain several able and valuable articles. It is published monthly, at $3 a year in advance.

Ewbank's Hydraulics and Mechanics.

The second and third parts of this work, now in course of re-publication by **Greely & McElrath**, are in good style. The engravings are neat, and afford good illustrations of the purposes for which they were designed. Considerable attention is now being given to the subject of hydraulics, and those who are interested in this branch of science would do well to purchase this work. The price is twenty-five cents for each number, which contains eighty pages.

Fifteenth Annual Report of the State Lunatic Hospital, at Worcester, Mass.

The amelioration of the condition of the insane, must afford pleasure to every benevolent mind. The increase and diffusion of the spirit of philanthropy, is perhaps, in no way more conspicuous, or its results presented in a more gratifying manner than in the improvements which have been made in the management of this unfortunate class of mankind.

The Institution at Worcester, is one of the largest of the kind in the country, and its excellent condition, under the supervision of Dr. **Chandler**, as well as under his predecessor, Dr. **Woodward**, has been the subject of frequent praise. The report is ably drawn up, and presents the details of the management of the Institution in an interesting manner.

The Agriculturist and Canadian Journal; a consolidation of the Britian American Cultivator and the Canada Farmer.

We have received the first number of the above work, which is to be published semi-monthly at Toronto, by R. **Brewer** & Co. Terms one dollar a year in advance. The work has a very respectable appearance, and we trust it will meet with a liberal patronage from our Canadian brethren.

American Journal of Science and Arts.—The number of this able work for March is before us. Among its contents we notice an article on the "Production of Light by Chemical Action," by Prof. **Draper**; "Parallelism of the Palœozoic Deposites of North America, with those of Europe," by **Verneuil**, translated by Prof. **James Hall**. "Notes upon the Drift and Alluvium of Ohio and the West," by **Charles Whittlesy**. An article from Dr. **Hare**, of Philadelphia, on the Theories of Electrical Phenomena. Chloroform, by B. **Silliman** Jr. Proceedings of the American Association of Geologists and Naturalists, at Boston, September, 1847. Abstract of a Meteorogical Journal kept at Marietta, Ohio by Dr **Hildreth**. The high character of the Journal as a scientific work entitles it to a liberal support. It is published at New-Haven, every second month, at $5 per year. Conducted by Professors **Silliman** & **Dana**.

Agricultural Journal, and Transactions of the Lower Canada Agricultural Society.

This is a monthly periodical, which was commenced in January last. It is designed as the organ of the Lower Canada Agricultural Society, a spirited and able association, incorporated in 1847. The numbers of the Journal which we have received, are well filled.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, March 18, 1848.

FLOUR—Genesee per bbl. $6.75—Ohio and Michigan $6.60.

GRAIN.—Wheat, Genesee, per bu., $1.50—Ohio, $1.40—Corn, northern, 55a56c.—Rye, 80a82c.—Oats, 48a50c.—Barley 80a90c.

BUTTER—Orange County, per lb., 20a22c.—Western, dairy, 16a18 c

CHEESE—per lb., 6a7½c.

BEEF—Mess, per bbl., $8.12½a$9.—Prime $5.12½a$6.

PORK—Mess, per bbl., $10.12½a10.25—Prime, $9.50.

HAMS—Smoked, per lb., 7¾a9c.

LARD—Per lb., in kegs, 8 3-8a8½c.

HEMP—Russia clean, per ton, $225a$230.—American dew-rotted, $120a$140.

HOPS—First sort, per lb., 5¾a6½c.

COTTON—New Orleans and Alabama, per lb., 6¾a10c.—Upland and Florida, 6½a8¼c.

WOOL—(Boston prices.) March 18.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,....................	40a45	"
" three-fourths blood fleeces,.........	35a38	"
" half blood do	32a33	"
" one-fourth blood and common,.....	28a30	"

The steamer Cambria arrived at Boston on the 18th inst., having English papers to the 28th February. The markets for breadstuffs and American provisions were dull, and without much change from previous dates. The news has not effected our domestic markets.

APRICOT TREES FOR SALE.

THE subscriber has 5,000 trees of his Early Golden Apricot for sale this spring. The trees are of good size, smooth and thrifty. Also a general assortment of Fruit Trees, and a large quantity of Isabella Grape Vines.
CHARLES DUBOIS,
Fishkill Landing, New-York
March 14, 1848—1t.

HOPE-TOWN OATS.

FIFTY bushels Hope-Town Oats, raised expressly for the Ag. Warehouse and Seed Store, from seed imported the past season by the proprietors. They are much earlier than the ordinary oats raised here, ripening when sown side by side some two weeks in advance—yield well, and the kernel is large and heavy. Price, $1 per bushel.

For sale at the Albany Ag. Warehouse, Nos. 10 & 12 Green-St., Albany.

PRINCE'S LINNÆAN BOTANIC GARDEN AND *Nurseries, Flushing, New-York.*

WM. R. PRINCE & Co., successors of Wm. Prince, and sole Proprietors of his great collection of Fruit Trees, &c., will transmit their new Catalogues (36th edition) to all post-paid applicants who desire to purchase. Also their new Wholesale Catalogues to all Nurseries. This immense collection is unrivalled in Europe or America. The Fruit and Ornamental Trees are of the largest sizes for planting, except a few new kinds of but recent introduction. Extra large sized Trees can be supplied of the Ornamental kinds from twelve to twenty feet, and extra sized Fruit Trees of most kinds, including *Ten Thousand* Standard and Pyramid Pears, *in a bearing state*, the former eight feet with heads, and the latter 3 to 4 years from the graft. Peaches at very reduced rates. Evergreens by 100 to 1,000, at low rates. Apples 3 to 4 years from the graft. A great supply of Cherries, Plums, Quinces, Spanish Chestnuts, Native and Foreign Grapes, Fastolf and other Raspberries, Gooseberries, Currants, Strawberries, Rhubarb, Asparagus, &c. 30,000 Hawthorns, and 50,000 Honey Locust, for hedge, 2 years, at $5.—Osage Orange, Buckthorns, &c.

All are at reasonable prices compared to the quality of the articles, and will be packed in a manner to insure success.

April 1—1t.

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city.

April 1—tf.

COMMERCIAL GARDEN AND NURSERY OF PARSONS & Co.,

Flushing, near New-York.

THE planting season being near at hand, the Proprietors now offer for sale in addition to their usual assortment, many new and choice varieties of Apples, Pears, Cherries, Peaches. Plums, Grapes and other fruits. They have also a fine stock of Pears on Quince ready for fruiting. By testing the kinds which they cultivate, and giving close personal attention to their propagation, they insure the correctness of the varieties which they send out. Their assortment of Ornamental Trees and Shrubs includes the standard varieties for the Avenue or Lawn. as well as many new and desirable kinds. Their collection of dwarf and tree *Roses* embraces all that is desirable.

Catalogues furnished gratis on application.

April 1—1t.

PROUTY & BARRETT,

Manufacturers and Wholesale and Retail Dealers in Agricultural and Horticultural Implements, Garden, Grass, Field, and Flower Seeds, 194½ *Market-St., Philadelphia,*

OFFER for sale an extensive assortment of FARM and GARDEN IMPLEMENTS and SEEDS, consisting in part of the following, viz:—

Prouty & Mears' Patent Centre-draught Self-sharpening, Right and Left Hand, Subsoil and Side Hill, Wheel and Swing PLOWS, with Points and Shares so strong and thoroughly purified and hardened, that 100 acres of land have often been plowed with a *single set.*

These Plows are constructed of the best materials, and of the highest finish, and for ease of draught and management, the facility with which their points and shares are turned and sharpened, the eradication of weeds and the thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, and the money refunded.

To these Plows were awarded TWENTY-THREE PREMIUMS at Trial Matches, during the past year, proving incontestably their great superiority over their numerous competitors.

Improved Cultivators, with steel teeth; Harrows, Revolving Horse Rakes, Agricultural Furnaces and Cauldrons, Corn Mills, Sugar Mills, Seed Planters, Corn Planters, Cheese Presses, Ox Yokes, Hovey's Spiral Hay, Straw, and Corn-stalk Cutter; Corn Shellers, Grant's Patent Fan Mills, and other approved patterns.

Spain's Improved Barrel Churn—Constructed in such a manner that the whole reel or dashers can be removed (whole) from the inside; the Churn is then clear of all impediments in the way of removing the Butter, and of a perfect cleaning.

Cast Steel Hoes, Shovels, Spades, Hay and Manure Forks, Scythes, Snaths, Briar Scythes and Hooks.

AGRICULTURAL, HORTICULTURAL AND FLOWER SEEDS, in great variety, raised expressly for this establishment by careful and experienced seed growers, and warranted.

☞ Orders solicited.

Philadelphia, April 1, 1848—2t.*

NEW WORK ON THE ROSE.

The Rose; its History, Poetry, Culture, and Classification.

By S. B. Parsons. New-York: Wiley & Putnam, pp. 280, *royal octavo, with Colored Engravings.*

A HANDSOME octavo volume, fully redeeming the promise of its title-page, which the reader will have noted takes in a wide field of practical and classical information. With the practical part of his subject, the culture and classification of the Rose, and with its history to some extent, we expected to find the author somewhat familiar, seeing that he is a well known and successful cultivator. But even in these respects, he has shown an amount of knowledge which we scarcely supposed any individual could have brought to their elucidation; while in the literature of the rose, so to speak, he has brought together such numerous tributes to its beauty, fragrance and emblematical character, as prove no mean acquaintance with the best poets. Indeed, his volume is at once agreeable, instructive, and curious, a very pleasant companion to the mere reader, while to the amateur and the professed cultivator of this most beautiful of Flora's gifts, it will be invaluable.—*N. Y. Commercial Advertiser.*

Altogether this may be considered the most agreeable and complete work on the rose in the English language. The author has not only collected and arranged all of most interest and value that has hitherto been written on this subject, but he has interwoven through the volume a good deal of interesting information, drawn from his own experience and observation, which has not before been given to the public. The volume is not simply a practical treatise for the rose cultivator, but a pleasant contribution to the library of the scholar, or the book-table of the lady's boudoir.

The volume contains colored plates of two of the new Roses which have elicited most admiration within the last three years—*La Reine* and *Chromatella.*—*Horticulturist.*

We regret that this beautiful and really valuable volume did not arrive while we had room for a notice worthy of its claims to public favor. All that romance, poetry, and science have endowed the Rose with—all that philosophers have found, and lovers fancied, and ladies felt, about this garner of sweet associations, is here set forth, and worthily; while on two shining pages the beauty herself appears, fairly mirrored in her most magnificent aspect, and seeming only to ask the plucking. We love the book.—*ion Magazine, by Mrs. Kirtland.* April 1—2t.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of Agricultural Implements of the latest and most approved patterns.

Plows adapted to every description of soil, embracing a greater variety of patterns than can be found in any other establishment in the United States.

Moore's highest premium Plows.
Freeborn & Hitchcock's do.
Minor, Horton & Co's do.
Ruggles, Nourse & Mason's do.
Prouty & Mear's do.
Subsoil do.

Two and Three Furrow Plows.
Side Hill and Double Mold do.
Cultivators with Steel and Cast Teeth.
Harrows.plain and double hinged
Garden & Canal Wheelbarrows.

Single and Double Corn Shellers, price $5 to $10.

Straw Cutters, Greene's, Steven's, Sinclair's, and other approved patterns.

Mills for grinding Grain. Corn and Cob Crushers.

Horse Powers and Threshing Machines.

Fanning Mills,
Rice do.
Coffee Hullers,
Sugar Mills,
Grain Cradles,
Seed Sowers,

Revolving Hay Rakes,
Hay and Manure Forks,
Scythes & Snathes,
Ox Yokes and Bows,
Log and Trace Chains,
Spades and Shovels.

Plow Castings, Castings for Horse Powers, Mill and Gin Geer, &c., &c. Also on hand and made to order, every description of Brass, Copper and Iron Wire, Cloth, Sieves, Screens, Riddles, &c., &c., all of which will be sold as low as they can be purchased at any establishment in the country.

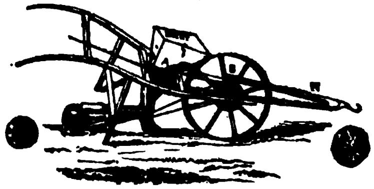
JOHN MOORE,
Ag. Warehouse, 193, old No. 183 Front-st., New-York.

April 1—3t.

TWO FARMS FOR SALE,

HANDSOMELY situated one mile north of Northville in the southern part of Cayuga county, each containing seventy-five acres of excellent land, in fine condition, with good farm buildings, orchards, &c. These farms are divided by the stage road between Auburn and Ithaca, equi-distant from each. They will be sold separately or together.

Apply to DAVID THOMAS, near Aurora, Cayuga county, or to ISAAC JACOBS, on the premises. 3 mo. 7, 1848.



EMERY'S SEED PLANTER.

WITH this Planter all small seeds are dropped by means of a revolving brush inside of the hopper, operating upon plates with holes in them, which plates are placed in grooves at the bottom of the hopper—any size hole being used which is found best adapted to the quantity and size of the seed to be sown, thus insuring precision and uniformity in the work. When Corn, Beans, Peas, or any heavy smooth seeds are to be dropped, the revolving brush and plate are removed, and a cylinder substituted with cups or cavities in it, which fill and empty by the gravity of the seed. These cups are made large or small by a simple set screw, which is readily turned up or down to receive any quantity of seed or none at all, thus enabling the quantity and distance between the hills to be regulated at pleasure. The movement of the cylinder is given by a simple small geer, and may, by the different rows of cogs on the large wheel, be regulated to give any velocity desired for different purposes. The furrower or plow can be placed up or down to suit a tall or short person at the handles—can be used by hand by one man, or can be drawn by a horse. From six to twelve acres of corn have been planted in the best possible manner in a day with them—according to the condition of the land.

The subscriber has a good assortment of them on hand and for sale at the Albany Ag. Warehouse, Nos. 10 & 12 Green-street, Albany. Price when fully rigged for all kinds of work, and strong for horse power, $14.

☞ For further particulars see Catalogue, gratis at store, or by mail. H. L. EMERY.

April 1, 1848.

NORMAN.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh. Norman is a beautiful dapple grey, 15¾ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500. The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner. *Terms*—$10 the season. Insurance to be agreed upon. Communications addressed, I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

RARE VEGETABLE SEEDS.

THE subscribers, in addition to their usual regular supplies of all descriptions of Garden, Field and Flower Seeds, have received from the first sources in England, the following NEW AND VALUABLE VEGETABLE GARDEN SEEDS, which will be found an acquisition to any collection, and worthy of trial.

PEAS.

Waite's Queen of Dwarfs.—Very dwarf, and ready for table 20th May. Price $1.50 per quart. Price in London, 5s. sterling.

Early Wonder Peas.—Dwarf and very early; full podded. $1 per quart.

Fairbeard's Early Surprise.—Very early and uniform bearers. $1.50 per quart. Height three feet.

Flack's Victory.—Large blue peas; finer than Dwarf Imperials. 50 cents per quart. Height three feet.

Dancer's Monastery.—Very fine. Height three feet. 50 cents per quart.

Cormack's British Queen.—Very large, shrivelled pea; superior to the famous Knight's Marrow, extra fine. Height four feet. $1.50 per quart.

Champion of England Marrow.—Extra fine, and prodigious bearers. Height four feet. $2 per quart. This is the most rare pea in England.

Banksian Marrow.—Great bearers. Height four feet. 50 cents per quart.

Shilling's Grotto.—Height four feet—fine. 50 cents per quart.

Improved London Dwarf Marrow.—Fine. 37½ cents per quart.

EARLY CABBAGES.

Superfine Early Dwarf.—25 cents per ounce.

Early Sprotsboro.—Large, and very early. 25 cents per ounce.

Waite's New Early Dwarf.—50 cents per ounce.

Atkin's Early Dwarf Matchless.—50 cents per ounce.

Shilling's Early Queen.—50 cents per ounce.

Also, superior London Early York—25 cents per ounce.

BROCCOLI.

Early Walcheren.—Very superior. $1 per ounce.

Late Walcheren.—Extra fine. $1 per ounce.

New October White Cape.—$1 per ounce.

Lake's Superior White.—50 cents per ounce.

Late Close Headed Purple.—50 cents per ounce.

Field's Superb White.—50 cents per ounce.

CAULIFLOWER.

Fitche's New Large Late.—Extra fine. $1.50 per ounce.

Early Walcheren.—Extra fine. $1 per ounce.

Late Walcheren.—Extra fine. $1 per ounce.

MISCELLANEOUS.

Shepherd's New Giant Pink Celery, 25 cents per packet—*Seymour's New Red*, 25 cents per packet—*Early Prize Fighter Cucumber*, 25 cents per packet—*Ady's New Coss Lettuce*, 50 cents per ounce—*Pink Edged Union Lettuce*, 25 cents per ounce.—*Myatt's Garnishing Parsley*, 25 cents per ounce.

Also, an extensive assortment of valuable AGRICULTURAL SEEDS, among which are *Skirving's New and Improved Ruta Baga*, to which has been awarded several premiums by the Royal Agricultural Society of England, $1.50 per lb—*Dickson's Improved Ruta Baga*, $1.25 per lb.—Best stock *Mangel Wurtzel—Silesia Sugar Beet—White Field Be'gian Carrot—Spring Tares or Vetches*, a valuable and nutritious soiling feed for horses and cows. Also, *White Lupins*, for soiling—*Italian* (annual) and *Pacey's Perennial Ray Grass—Sweet Vernal Grass—Herds and Blue Grass—Fine Mixed English Lawn Grass*, 50 cwt.—*White Dutch Honeysuckle Clover—Lucerne or French Clover—Yellow and Scarlet Trefoil*—Clean *Potato Seed*, 25 cents per packet.

Buckthorn Seed—Maclura or Osage Orange, and *Honey Locust, or Gleditschia*, for Hedging, the last forming an impenetrable fence. *Yellow Ship Locust*—with every thing new and good procureable from both Hemispheres, whether for the Field, Garden or Parterre.

All the above are of the growth of 1847, and warranted genuine.

JAMES M. THORBURN & CO.,
No 15 John-Street, near Broadway, New-York.

☞ Catalogues gratis, on application. For new Flower Seeds, &c., see future advertisement. April 1, 1848—1t.

ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess, or suffering injury from its use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

VERY DESIRABLE AND VALUABLE FARM FOR SALE.

THE subscriber offers for sale his farm, pleasantly situated on the Union Turnpike, within half a mile northeast of the city of Hudson, Columbia county, N. Y., containing 70 acres of good land, under a good state of cultivation, and well watered: About 30 acres of which are good plow land, six acres of wood, the remainder, is loam, suitable for plow or meadow land. There is a substantial Brick House, a Work Shop, Barn, and necessary outbuildings. Likewise a Cottage on the premises.

This property was formerly owned and improved by the late Elisha Williams, Esq. The subscriber considers it the most desirable property in the neighborhood. To any person wishing to engage in the Milk, Nursery or Gardening business, it offers great advantages. Title indisputable.

Enquire of MILLER & McKINSTRY, Solicitors, Hudson, or the subscriber on the premises. T. H. PEGLER.

April 1, 1848—1t.*

W. & B. DOUGLAS' IMPROVED PREMIUM HYDRAULIC RAM.

A PERFECTLY simple and effective machine for forcing a portion of a brook or spring to any required distance or elevation, where a proportionate fall can be applied.

A SILVER MEDAL was awarded to the subscribers on their Improved Hydraulic Ram by the American Institute, at the Fair held in the city of New-York, in October, 1847. A PREMIUM was also awarded on the same by the Middlesex County Agricultural Society, at their Fair held in this city in October, 1847.

The various uses of the Ram are at once obvious, viz: for the purposes of irrigating Lands, and supplying Dwellings, Gardens, Farms, Factories, Villages, Engines, Railroad Stations, &c., with running water.

The simplicity of the operation of this machine, together with its effectiveness and very apparent durability, renders it decidedly the most important and valuable apparatus yet developed in Hydraulics, for forcing a portion of a running stream of water to any distance and elevation, proportioned to the fall obtained.

It is perfectly applicable where no more than 18 inches fall can be obtained, yet the greater the fall applied, the higher may the water be conveyed, the quantity raised varying in proportion to the height with a given fall. It will raise say one-eleventh of the water ten times the height of the fall to which it is applied. Thus if applied under a fall of five feet, with a supply of eleven gallons per minute, it will force up and discharge at an elevation of fifty feet from machine, one gallon per minute; and under the same head or fall it will of course raise and discharge a larger quantity of water in proportion as the height to which it is conveyed is diminished, and so a less quantity a greater height.

This ram is constructed with an Adjuster, which renders it decidedly superior to any thing of the kind yet invented, as by this improvement the same machine may be conveniently varied in capacity, and at once adapted to various sized streams!

They are composed of metal, and are a very neat, compact and portable article—No. 4, the ordinary size, weighing but about 35 lbs., and occupying only about a cubic foot of space.

The subscribers, manufacturers of the Ram, offer the same in any quantity and of various sizes, to merchants, dealers, and all in want, at prices that cannot fail to please.

In all cases the article is warranted complete and perfect, so as to give the best satisfaction, or it may be returned.

Orders respectfully solicited, to which prompt attention will be given.

W. & B. DOUGLAS,
Machinists and Iron Founders, Manufacturers of Pumps, Hydraulic Rams, Friction Rolls, Sheaves, Arbor Cranks, &c.

Middletown, Conn., April 1, 1848.

For sale at the Albany Ag. Warehouse, by H. L. EMERY, Nos. 10 & 12 Green-st.—in Troy, at H. WARREN'S Ag. Warehouse, 315 River-st.; and by the Hardware and other traders in the principal cities of the United States.

PATENT RIGHT SECURED.

N. B.—The following certificates have been very kindly tendered us by gentlemen who have our rams in use:—

CERTIFICATES.

This is to certify, that I have purchased and put in use one of W. & B. Douglas' Improved Hydraulic Rams on my farm, and I am perfectly satisfied and well pleased with the operation of the article, and would recommend its use to all who are desirous of raising water from any spring or other running stream about their premises. The spring to which I have applied the ram is 50 rods from my house, and 75 feet below a level of point where I discharge the water in my dwelling. The size of the drive pipe applied to my ram is 1½ inch calibre, and 40 feet long, and has a fall in running from spring to ram of 16 feet. The discharge, pipe, (leading from ram to house) is ½ inch calibre, and 50 rods in length, and runs up an elevation of 85 feet, and the water discharges from the same, in my house, a perfectly steady and handsome stream, without any interruption whatever. And I would invite all, who wish to become acquainted with this new and truly useful invention, to call at my house in Durham and witness its operations.

Durham, Ct., Sept. 25th, 1847. SAMUEL G. TIBBALS.

This is to certify that I have in use on my farm, one of Messrs. W. & B. Douglas' Improved Hydraulic Rams, and can most cheerfully recommend it as being an article of the utmost value and utility to all who are desirous of raising a supply of water to their premises.

My spring is some 30 rods distant, and 35 feet below a level of the point where the water is discharged by the ram in my yard. The water is applied to the machine with but 3½ ft. head or fall, and thus a portion of it is raised 10 feet high to every foot of fall applied. The size of the drive or supply pipe, from spring to ram, is 1½ inch, and the machine forces up and discharges a constant stream of water in my yard of say half an inch, conveying it up the above named elevation of 35 feet, and a distance of 30 rods.

Upper Middletown, Ct., Jan. 5, 1848. CHARLES MATHER.

THE GENUINE MORGAN HORSE,

GENERAL GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of George A. Mason, two miles northeast of Jordan; Thursdays, Fridays and Saturdays at the stable of D. A. Munro, Camillus.

Terms—$10 the season. Insurance to be agreed upon. Pasturage furnished by either of the subscribers at reasonable prices. Escapes and accidents at the risk of owners. General Gifford was sired by *Gifford Morgan*. His dam a pure Morgan. Breeders of good horses are invited to call and see him.

April 1, 1848—3t. MUNRO & MASON.

HALL'S EARLY JUNE POTATOES.

TWO hundred bushels of these superior and early potatoes for sale at the Albany Ag. Warehouse and Seed Store.

BALL SEMINARY,

HOOSICK FALLS, N. Y.

THIS institution, incorporated by the Regents of the University, and subject to their supervision, has for its object instruction in the higher branches of English education, and the classics, to an advanced standing in college.

Instruction will also be given in Geology, Mineralogy and Agricultural Chemistry; explained and illustrated by lectures, diagrams, and experiments.

The trustees have secured the services of P. V. Veeder, Esq., a graduate of Union College, and favorably known as tutor in that institution, to take charge of the school, who will be aided by competent and faithful assistants.

The Seminary is located in a healthy and pleasant village. The charges are moderate, and the advantages not surpassed by any school in the State. L. CHANDLER BALL, President.

April 1—1t.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N. Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles as small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

P. S. Fluid Cataracts removed without an operation.

April 1—4t.

FRUIT TREES, *of Select Varieties,*

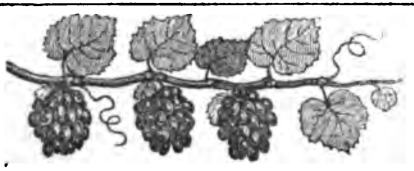
PROPAGATED from trees, whose genuineness or excellence has been proved by thorough examination of the fruit in bearing. For sale at the nursery of the subscriber.

☞ Persons wishing to set out new Fruit Gardens or Orchards, will, if they wish, be furnished with a carefully assorted collection, either large or small, of apples, peaches, cherries, nectarines, apricots, strawberries, hardy grapes, &c., of the best standard varieties, which have been selected after several years careful personal examination, *from several hundred sorts in bearing.*

A fine select assortment of ornamental shrubs, brilliant hardy roses, herbaceous perennial plants, evergreens perfectly hardened for transplanting, &c.

Orders with remittances promptly executed, and trees packed in bundles so as to be sent with perfect safety by canal or railway. Catalogues furnished gratis to all applicants. All communications to be post-paid, and directed, J. J. THOMAS,

March 1—2t. Macedon. Wayne Co.. N Y.



ISABELLA GRAPES,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over ten years has conferred on the vineyards at Croton Point, are now offered to the public. Those who may purchase will receive such instructions as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post-paid, addressed to R. T. UNDERHILL, M. D.. 310 Broadway, New-York, till the 25th of April, and after that time to Croton Point, N. Y., will receive attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c., that they will generally ripen well, and produce good fruit when planted in most of the northern, and all of the western, middle, and southern States.

New-York, March 1—2t.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine. will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description. attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.

March 1—5t*. 128 Fulton-st., New-York.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

NOTICE—A. J. Downing having retired from the Nursery business, heretofore conducted at this place under the firm of *A. J. Downing & Co.*, the same will be continued by the subscribers. They will not only endeavor to maintain the high character which those nurseries have had, but as the present stock is gradually drawn off Mr. Downing's grounds they will greatly enlarge the nurseries, and fully endeavor to meet the constantly increasing demand for trees grown here. A. SAUL & Co.

The undersigned strongly recommends the above Nursery firm to public confidence.

The practical management of the Nurseries will be in the hands of Mr. A. Saul, who has been at the head of this department for the last eight years, and his accuracy and fidelity in the propagation of fruits, and general care of nurseries during that time, are the best guarantee for the faithful and careful manner in which the business will hereafter be conducted. A. J. DOWNING.

Highland Garden, Newburgh, Feb. 15th, 1847.

A. SAUL & Co. beg leave to inform the patrons of this establishment and the public in general, that their stock of

Fruit Trees for Spring Planting, 1848,

Comprises nearly all the choice and rare varieties of recent introduction, among which are a fine stock of the *True Peach Plum*, (Prune Peche,) and Dubois' Early Golden Apricot, as well as a large stock, and full assortment of all the leading standard varieties; all propagated from *tested* fruit trees, or the most correct sources, under the personal supervision of A. Saul.

Their stock of ornamental trees is unusually large, (for particulars see Cultivator for October and November, 1847. Also Shrubs, Roses, Vines, &c. &c.: and as they propose clearing a large portion off of Mr. D.'s grounds this spring, to their new grounds, (40 acres,) they will dispose of a large portion of it at reduced rates to nurserymen, or amateurs who want to plant largely for the embellishment of new places. Also a fine stock of

5,000 American Arbor Vitæ, for screens, $15 to $30 per 100.
10,000 Osage Orange plants for hedges, $12 per 1000.
20,000 Buckthorn plants for hedges, $8 per 1000.

Orders addressed as above, *postpaid*, will receive prompt attention, and all trees, plants, &c. will be carefully packed and shipped to any part of the Union. Catalogues gratis to postpaid applicants.

Highland Nurseries, Newburgh, Feb. 10th, 1848.—2t.

SYRACUSE NURSERY.

THE subscribers would call the attention of the public to their extensive and well selected assortment of Fruit and Ornamental Trees, consisting of

200,000 Grafted Apple Trees, from 1 to 5 years' growth, 60,000 of which are from 6 to 9 feet high; 3 to 5,000 of the celebrated Northern Spy, 4 to 8 feet high, can be supplied without extra charge to those ordering other varieties.

6 to 8,000 Pear Trees, 4 to 7 feet high.

A few hundred of the Onondaga, and Van Mon's Leon Le Clerc, (very thrifty,) can be supplied, of one and two years' growth, from 50 cts. to $1.00 each.

1,000 Cherry Trees, 6 to 9 feet high.

10 to 15.000 Peach Trees, of the best early varieties, thrifty and free from disease.

Apricots and Nectarines, a good supply.

3 to 500,000 Apple Seedlings, from two to three years old, and unusually large.

Also, a large quantity of Horse Chestnut, Ailanthus, and Mountain Ash, of extra size, and good form, together with all the desirable varieties of the Grape.

All post-paid communications and orders containing remittances, promptly attended to. THORP & SMITH.

Syracuse. N. Y., Nov 1—6t

A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in in front; has sixteen apartments, including kitchens and cellars. A frame bank barn, with stone basement, 63 by 38 feet; the corner posts twenty-two feet six inches high. With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr. Samuel Lawrence of Lowell, Mass., or Messrs. Perkins and Brown of Springfield, Mass. For terms apply on the premises.

February 7th, 1848.—3t.* JOHN SMART.

FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and outhouses are new and convenient. A fine large orchard, embracing all kinds of choice fruit trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the west.

March 1—3t. A. H. NICHOLS.

AGRICULTURAL IMPLEMENTS AND SEEDS.

Ruggles, Nourse & Mason,

Inventors & Manufacturers of the genuine Eagle Plows.

TO their extensive assortment of Plows they have recently added new patterns, embracing many important improvements, in form, construction and fixtures, which adapt them to both shoal and deep plowing. The peculiar form of the mould-board to take up the furrow slice and turn it over in the most perfect manner, with the least power of draft, leaving the soil in the best possible condition for after cultivation, and production of crops. The acknowledged strength and durability of the castings, the uniform construction and superior finish of the wood by machinery, are among the characteristics of their Plows.

At the most full, perfect trial and investigation of plows ever had in this country, held at Essex, county Mass., the Judging Committee, in speaking of the Improved Eagle Plow, to which they unanimously awarded the highest premium, say:—"As near as we can ascertain, this Plow combines all the good qualities manifested in either of the others, with some peculiar to itself;" and further, "our attention was called to the *quality* of the castings on the Plows of Ruggles & Co., their *finish* and *durability*. Their appearance is certainly more perfect than any thing we have elsewhere seen." "The process of Chilling the Point, the entire Edge of the Share and Flange or Base of the Landside. gives a permanence and durability to the work that renders it of a decidedly superior character," "and we think there is no hazard in saying that the value of the parts thus made is more than doubled by the process."

The following is a copy of their table showing the comparative amount of power in pounds, required to operate the different plows.

Medium Size Plows.

Winslows's	of Danvers,	462	lbs.
Ruggles & Co.,	of Worcester,	412	"
Prouty & Co.,	of Boston.	425	"
Howard,	of Hingham,	412	"

Large Size Plows.

Winslow	of Danvers,	512	lbs.
Ruggles & Co., Eagle,	of Worcester,	425	"
Prouty & Co., Sod A	of Boston,	487	"
Howard,	of Hingham,	450	"

In 1846, the first premiums were awarded to competitiors who used Plows made by Ruggles, Nourse and Mason, at Plowing matches in the following named counties, to wit: Essex, Middlesex, Worcester, Hampshire and Berkshire, in Mass.; Orleans and Windham, Vt.; Kennebec, Me.; Litchfield and Hartford, Conn.; Prince George's and Montgomery counties, Md.

At the Cattle Shows held in 1847, the following premiums were won by Plowmen with Plows manufactured by Ruggles, Nourse & Mason.

ESSEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 25.
" "	2d Premium,	"	Eagle Sward B.
" "	3d Premium,	"	Eagle No. 25.
Horse Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 2.
" "	3d Premium,	"	Eagle No. 2.
Subbsoiling,	1st Premium,	"	Eagle S. S. No. 1.

MIDDLESEX COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Doule Team,	1st Premium,	"	Eagle No. 20.
" "	2d Premium,	"	Eagle No. 20.
" "	4th Premium,	"	Eagle No. 25.
Horse Team,	1st Premium,	"	Eagle No. 2.

BRISTOL COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Sward C.
" "	2d Premium,	"	Eagle No. 2.
" "	4th Premium,	"	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 20.

BARNSTABLE COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
Double Team,	1st Premium,	"	Eagle No. 2.
" "	2d Premium,	"	Eagle No 2.
" "	3d Premium,	"	Eagle No. 2.
Horse Team,	1st Premium,	"	Self Sh'ug No. 3.

HAMPDEN COUNTY, MASS.

Single Team,	1st Premium,	Plow,	Eagle No. 2.
" "	2d Premium,	"	Eagle No. 1.
" "	6th Premium,	"	Eagle No. 2.

BERKSHIRE COUNTY, MASS.

1st Premium, and 7 others, Plows, Eagle Nos. 1 and 2.
1st Premium for the best Plows.

HAMPSHIRE COUNTY, MASS.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	7th Premium,	"	Eagle No. 2.
	8th Premium,	"	Eagle No. 2.

MERRIMACK COUNTY, N. H.

Single Team, only used.	1st Premium,	Plow,	Eagle No. 2.
	2d Premium,	"	Eagle No. 20.
	3d Premium,	"	Eagle No. 2.

HARTFORD COUNTY, CONN.

1st Premium,	Plow,	Eagle No. 25.
2d Premium,	"	Eagle No. 2.
3d Premium,	"	Sward D.

WASHINGTON COUNTY, VT.

1st Premium, Plow, Eagle No. 2.

ROCHESTER, MONROE COUNTY, N. Y.

Horse Team, only used	1st Premium,	Plow,	Sward C.
	2d Premium,	"	Eagle No. 25.

MONTGOMERY COUNTY, MD

1st Premium for 3 horse size, Eagle No. 25.
1st Premium " 1 " " Self Sharpener No. 1.

They have also constructed a series of new patterns of plows of various sizes and forms, (some with wrought-mould plates, shares, or points,) expressly calculated for the different *kinds* and *methods* of cultivation practiced in the Southern States, and which embrace all the alterations which a long and thorough investigation, and more extended acquaintance with southern culture has suggested, to render them peculiarly adapted to the wants of the planters.

Their stock of Garden and Field *Seeds* are raised especially for their trade, by most reliable and experienced growers, and are warranted fresh, and true to their names.

Their prices being *uniform*, purchasers can rely on having all orders executed on as favorable terms, and promptly as though they were personally present.

Dealers supplied on the most advantageous terms.

A supply of PLOWS and other articles from their establishment may be found at the stores of L. Tucker, Albany; A B. Allen & Co., New-York city; R. L. Allen, New-Orleans; and at many other cities and principal towns throughout the country.

P. S. As it is impracticable here to give a detailed list of articles embraced in so great a variety, the proprietors propose to forward, (*gratis*) to persons requesting them, by mail or otherwise, descriptive catalogues of implements and seeds, of nearly 100 pages, embellished with cuts of tools, and embracing brief directions for sowing, planting and culture, rules for the application of Guano, Plaster and Bone Dust, with remarks on soils and plowing; and with general observations, list of agricultural and horticultural publications, &c. &c.

Worcester and Boston, Mass., March 1, 1848—3t.

FINE BLOOD MERINO SHEEP FOR SALE.

THE subscriber being about to retire from the farming business, offers for sale his entire flock of Merino sheep, which have been bred with the greatest care from the best flocks in the country. Of these 75 are ewes now with lamb by a buck from the recent imported flock of John A. Taintor, Esq., of Hartford, Conn.; 25 bucks one year old last spring from the above ewes, sired by the Rambouillet buck Chancellor; and 50 lambs the increase of last year, sired by the Rambouillet buck Grandee, now owned by the Rev. L. G. Bingham, of this place. As to purity of blood, fineness and weight of fleece, and strength of constitution, they are excelled by no Merinos in the country. The buck purchased from the recent importation of Mr. Taintor will also be offered for sale. To those wishing to improve their sheep, or those wishing to start a good flock, the present offers a rare opportunity, as they will be sold without reserve. Communications addressed to the subscriber will receive immediate attention THOS. D. CANFIELD.

Williston, Vt., Jan. 15, 1848—3t.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—8t. JAMES PLANT & Co.

POUDRETTE.

THE LODI MANUFACTURING CO. offer for sale their New and Improved POUDRETTE, at the following reduced prices: One barrel, $2; three barrels, $5; and seven barrels and upwards at $1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels ($3 worth) will suffice per acre, and bring a good crop; the labor being less than one-half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B. Allen & Co, agents, No. 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t*.

TO BREEDERS OF FAST HORSES.

THE celebrated Stallion Colt "ANGLO-SAXON," will stand for the ensuing season, at the farm of *Josiah Crosby*, in North Andover, Mass "Anglo-Saxon" was sired by the original Black Hawk, now owned by the Messrs. Hill, in Vermont. He will be four years old in July next. His color is a bright bay. He weighs a thousand pounds, and though not entirely broken to harness, has great speed and splendid action. He took the first premium at the last Fair of the Essex County Agricultural Society; and has been pronounced by amateurs a *perfect* animal. Like the rest of the "Black Hawks," he needs no encomium. Breeders are requested to examine and judge for themselves.

The "Lady Lawrence," a five years old chestnut mare, sired by Black Hawk, may be seen at the same stable. She can trot her mile in two minutes and forty seconds—has never been trained, and can be bought for $1000, if applied for immediately.

North Andover, March 1st, 1848.—2t*

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ALBANY AGRICULTURAL WAREHOUSE.

THE subscriber hereby gives notice, that he has disposed of his interest in this establishment to Mr. HORACE L. EMERY, who will hereafter continue the business in his own name, at the old stand, Nos 10 & 12 Green-st., Albany. All demands against the establishment will be paid by him; and all persons indebted to it, are requested to settle their accounts with him without delay.

Mr. Emery has had the entire management of the Albany Agricultural Warehouse since it has been in my hands, and from an acquaintance thus formed with him, and from his long experience in the business, having been engaged in it some ten years, five of which was spent in the establishment of Messrs. Ruggles, Nourse & Mason, at Boston and Worcester, Mass, (the largest in America,) I feel an entire confidence in commending him to the public as one in whose integrity and judgment the patrons of the establishment may safely rely.

Albany, Feb. 1, 1848. LUTHER TUCKER.

N. B. The publication of the Cultivator and Horticulturist will be continued at the same stand as heretofore.

THE subscriber tenders his thanks to the public for the liberal encouragement and patronage shown towards the establishment since under his management, and hopes with the increasing interest manifested by the agricultural community for improvement and good tools, and constant and persevering attention on his part to the interests of the establishment and its patrons, to merit a continuance of the same He intends at all times to keep the best of implements, from the best manufacturers of this or other countries; also a full and complete assortment of Grain, Field, Grass, Garden and Flower Seeds; and all business will be transacted as heretofore upon the *One Price System*.

For prices, descriptions, &c., see Catalogue of Agricultural Warehouse, gratis, at Store, or by mail, to post-paid applicants.

HORACE L. EMERY,
Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, N. Y.

NEW-YORK AGRICULTURAL WAREHOUSE AND SEED STORE.

THE subscribers keep constantly on hand a large and complete assortment of Agricultural and Horticultural Implements, and Field and Garden Seeds of all kinds.

Our implements embrace upwards of sixty different sizes and kinds of Plows, among which are the celebrated Ruggles, Nourse & Mason's Eagle, Center Draft, Self-Sharpener, Side Hill, Cotton, Rice, Sugar Cane, Double Mould Board, Trenching, Subsoil, &c., &c. Also, Harrows, Rollers, Cultivators, Corn Shellers, Straw Cutters, Wheat and Corn Mills, Horse Powers, Threshers, Scythes, Cradles, Axes, Horse and Hand Rakes, Shovels, Spades, Hoes, Grafting Tools, &c., &c.

A Catalogue of the above of 100 pages, illustrated with numerous engravings, will be sent gratis to all who apply for it, post-paid.

A. B. ALLEN & CO.,
April 1, 1848—1t. 187 Water-st., New-York.

FIELD AND GARDEN SEEDS.

A COMPLETE assortment of American Field and Garden Seeds, of all kinds, principally grown and put up expressly for us.

Also, Fresh English and French Grass and other Seeds, just received. Among these are the Perennial and Italian Ray Grass, Sweet Vernal and Oat Grass, fine mixed Lawn Grass, White Clover and Lucerne. Also, English Beans, Vetches, Ruta Baga Seed, &c., &c.

Agricultural and Horticultural Implements, a complete assortment.

The American Agriculturist, a monthly publication of 32 pages. Price $1 a year.

New-York Agricultural Warehouse and Seed Store, 187 Water-street, New-York. A. B. ALLEN & CO.
April 1, 1848—1t.

THE EAGLE PLOW.

PROBABLY no Plow has been so long before the public with so few alterations, come into so general use, or received so many, and of so high grade premiums, as the Eagle Plows, from the establishment of Messrs. Ruggles, Nourse and Mason.

Notwithstanding the great diversity of soils, modes of culture, and the increasing competition of many distinguished manufacturers, and year after year having been subjected to the most systematic, persevering and thorough trials ever had in this country, it still stands at the head of the list for excellence of work, materials, workmanship, durability and price.

By referring to the advertisement of the manufacturers in this and the last number of the Cultivator, will be seen the high estimation put upon them by committees and plowmen, as well as their very general use where they have become known.

It is but just here to state, that in the most important trials in New England, the plowmen are required to use the same plows and teams which have been used on their farms, not less than sixty days previous to the trials. The owners are required to hold their own plows, to perform a certain amount of work, usually one-eighth of an acre of a given width and depth of furrows, in a given time. All of which rules and regulations are made known months before-hand, thus avoiding very many difficulties which often arise in deciding who really merit the awards and premiums.

A full and complete assortment constantly on hand and for sale at *manufacturer's home prices at wholesale and retail*, at the Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, by
April 1. H. L. EMERY.

BUCKTHORN PLANTS AND SEEDS;

ALSO OSAGE ORANGE PLANTS. A full and large supply on hand, and for sale at the Albany Ag. Warehouse and Seed Store. April 1.

OSAGE ORANGE SEED—(*Maclura aurantiaca.*)

THE best article known for hedges or live fences. A large supply of the seed just arrived from Texas, price $2 per quart—a liberal discount at wholesale. Directions for planting, &c., furnished to customers. Office of the Ohio Cultivator, Columbus, Ohio. M. B. BATEHAM.

☞ Packages can be safely forwarded to any place on important stage routes in Ohio, on the Ohio river, or eastward by Express.
April 1—1t.

OSAGE ORANGE SEED.

THIRTY-five bushels Osage Orange Seed, growth of 1847, just received and for sale by ALONZO HITCHCOCK, St Louis, Missouri. April 1—1t.

DARLING'S IMPROVED EARLY SWEET CORN.

A LIMITED supply of this excellent seed corn for early use. Also a supply of early White Flint, Early Canada, Jewett's Improved and Dutton Seed Corn. For sale at the Albany Agricultural Warehouse. April 1.

UPLAND CRANBERRY PLANTS.

FROM a field that has produced twelve hundred and eighty dollars worth of fruit per acre in one season.

For sale in large or small quantities on the best terms by
B. G. BOSWELL,
April 1—1t. 230 Pine-st., Philadelphia.

NURSERY TREES FOR SALE.

GRAFTED Cherry Trees—price 50 cents each—*Innoculated Peach Trees*—price 12 1-2 cents each. Also a few Peach trees raised from stones brought from Buenos Ayres, where the fruit is said to be of superior quality. These trees are of two years growth, and not inoculated—price 50 cents each.

Asparagus roots of two and three years large growth at $5 per thousand, by ISAAC ROOSEVELT,
Pelham, near New Rochelle, Westchester Co., N. Y.
Feb. 21, 1848—1t.*

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, MAY, 1848. No. 5.

THE FARM OF E. PHINNEY, ESQ.

(*Continued from page 107.*)

EDITORS CULTIVATOR—In my last communication, I proposed to continue my notes on Mr. PHINNEY'S farming, under the following heads:

DRAINING AND RECLAIMING SWAMPS AND WET LANDS.—There is an extensive peat-meadow on the farm, the greater part of which has been reclaimed by thorough draining and cultivation. Mr. Phinney says that the only way to make these meadows dry and productive in valuable grasses, is to ditch around the margin so as to cut off the springs and receive the water which flows in continually from the surrounding uplands. It is the water flowing in underneath, and not that falling on the surface, that renders the land cold, wet, and unproductive. In order to effect this, he has a very thorough ditch around the margin of the meadow, which is filled with stones to within a foot or so of the surface; they are then covered with refuse hay, straw or sods, and the whole levelled off with the soil, so that the plow may pass over in cultivation. His meadow is very wide, and therefore he has another ditch through the centre, connected with the marginal ones by cross-ditches, and through these the water filters among the stones, and is carried off perfectly.

After this has been done, the wild grasses and other herbage are exterminated by thorough cultivation. If the meadow becomes dry enough during the season to plow, the turf is turned over as smoothly as possible and rolled down hard; in the winter a top-dressing of compost, made of loam and manure, half and half, 20 to 30 loads per acre, is carried on, and in the spring it is planted to corn, or some other hoed crop, without disturbing the sod. If the plow does not turn the sods smoothly over, the bog-hoe follows making the uneven places level. When the crop is taken off in the fall, the surface is loosened and made level with the hoe and harrow, and late in the fall, or just before heavy frosts set in to freeze up the ground, the land is stocked down to grass with a bushel of red-top and half bushel of herd's-grass seed per acre; the field is again rolled and the process completed, the seed coming up the next spring. If the land is intended for grass, without any previous cultivation, the turf is turned over with the plow at a favorable time during the summer; the hoe following makes all smooth, and late in the fall a dressing of compost, as before stated, is put on, the grass-seed sown, and the bush and roller complete the operation. If the ground is too wet and miry to admit the team and plow upon it in the summer, Mr. Phinney would advise to plow in the spring, when the frost is about three or four inches deep, and then cart on the compost-dressing, and, at the proper time, plant or seed down as may be most desirable.

Instead of this method of cultivation, the practice has been, and is now pursued by some, to cover the meadows two or three inches thick with sand or gravel, and then a top-dressing of compost; but Mr. Phinney's experience is against this method of cultivation, from the fact that, after a year or two, the coarse, wild grasses are apt to work up through the covering, and entirely supplant the cultivated grasses. The whole must then have another covering or be abandoned as worthless. The expense of this system is also much greater than that pursued by Mr. Phinney.

Considerable difficulty arises in the cultivation of this kind of land, from its being too loose and open, or spongy; and hence it is considered of much importance to keep the inverted sod undisturbed in the cultivation; as by this means a more firm and compact surface is formed, upon which the team may work without miring; and, the dressing of compost also helping to fill up the pores that may be open on top, affords greater facility for the fine roots of the cultivated grasses to expand more readily, and fully occupy and cover the ground. In five or six years the wild grasses may begin to appear; in which case the land is again broken up and managed as before. In this way heavy crops of corn and roots, and an immense burden of hay, may be raised on these reclaimed meadows.

There is another field on this farm, I should judge of eight to ten acres, of oblong shape, the sides dishing towards the centre, and the whole moderately descending lengthwise, which he has now in hand for draining. It is naturally a wet, unproductive, *swaley* soil, resting on an impervious hard-pan at about two feet below the surface. A marginal ditch, three feet wide and three deep, is made on each side of the field through its whole length, which cuts off the springs, and receives the water flowing in from the uplands; another parallel with these runs through the centre of the field, and the two former are connected with the latter by cross-ditches occurring every two or three rods, by which means the water is carried into the lowest or centre ditch, through which it passes off the field. These are all filled with stones two feet deep, which are covered, first with shavings, refuse litter or sods to keep the dirt out from the stones, and then with earth so as to make all smooth and level. The surplus water is thus carried off perfectly, as may be ascertained by holding the ear near the surface, over the drains, when the water may be distinctly heard filtering through among the stones.

This piece of drainage must prove a profitable investment; because the land, from its situation, receives the surface-wash of many highly cultivated acres on each side, the whole value of which will now be retained—the land being drained with *covered* ditches—

and, with an occasional light top-dressing of compost, must inevitably cut a heavy burden of grass, of fine and thick bottom, for many years to come. How many acres of land may be found, the whole country over, precisely in the condition of this field, where quite an outlay even, would prove a judicious and profitable investment?—the more profitable from the fact that, while in their cold and wet condition, all the surface-wash of the surrounding uplands, often times extensive, is wholly lost; it might be made available by thorough underdraining, and would of itself keep the land so receiving it highly productive.

ORCHARDS AND THEIR CULTIVATION.—There are two bearing orchards on the farm. One, planted about twenty years ago, contains some five hundred trees, mostly of the Baldwin apple, a variety that flourishes best on his soil and location; and the other, ten or twelve years old, contains between three and four hundred trees of choice winter sweet apples. The ground upon which the Baldwin orchard is planted, has a south and southeast exposure, and was, originally, in a perfectly wild and unsubdued state, covered with stones and shrub-oaks, pines and other bushes. Hundreds of tons of these stones were put into the ditches for draining the peat-meadow, towards which the orchard descends. After the obstructions to cultivation were removed from the ground, a light, free rich loam was found, resting upon a gravelly, and in some places, ledgy bottom.

The sweet apple orchard has, I should say, an eastern exposure, and, for skilful pruning, healthiness and vigor of the trees, presents an appearance far superior to anything of the kind I had before seen.

In reply to the inquiries of the Hon. John Lowell, several years since, Mr. Phinney says:—" Most of my trees were taken from the nursery in November, the roots placed in trenches, and covered with dirt until the following spring. This was done in order to avoid the necessity of setting them out before the ground had become dry and warm. If left in the nursery till spring they are seldom or never taken up till the sap has begun to flow. When removed after this takes place, the check occasioned by the removal, if not fatal to the true, often injures its future growth. The best time to take up trees is unquestionably when the sap is least active. If taken up late in autumn, and the roots secured from sun and air, they may be kept with perfect safety until the middle of May, and planted out at this time with proper care, and as near the surface as possible, vegetation will commence almost instantaneously; they will not require to be supported by stakes, and will grow nearly as much the first as in any future year."

While the trees were young and the branches small, and at the season when the sap is most freely flowing, and the growth most rapid, the operation of pruning has, mostly, been performed by Mr. Phinney personally, and the orchards now show the hand of skill and judgment in their training. Those branches which tended to shoot out horizontally, or nearly at right angles from the trunk, were left to grow; while those which inclined to grow more erect, or at an angle of 45 degrees, were taken off—the whole operation being so managed as that no limb should shade any other limb, and at the same time an eye was kept to the proper and equal balance of the top.

By this mode of pruning the tops are spread out horizontally from the trunk, thus admitting the sun to exert his genial influence in the perfecting and ripening of all the fruit; with the further advantages that it is gathered with greater facility, and the limbs are much less liable to split off from the trunk, when loaded with fruit, than those rising to an angle more acute. In the former case, the limb may bend and sway considerably, without straining very hard on the trunk, while in the latter, the strain commences almost as soon as the limb is inclined to bend with its load.

Probably the principal cause of the remarkable vigor and healthiness of the trees, is to be found in the fact that the land is kept in constant cultivation, no grass or weeds being permitted to grow in the soil. It is not thought desirable to manure the orchards heavily, as by this means they may be forced too much; but the land receives a light dressing of compost each year, and here his crops of carrots, parsneps and other roots —of which he raises large quantities—his squashes, pumpkins, melons, &c., are mostly grown. Corn is also planted to some extent.

The trees stand in straight rows, both ways, about two rods apart. The manure is plowed in, great care being used not to wound the trees above ground, and I noticed that no signs of injury to the bark were any where to be seen. No particular attention is paid to the roots; if one happens to come to the surface it is cut off, which only causes new fibres to shoot out with greater vigor. It is considered that root pruning, to some extent, is beneficial rather than otherwise.

A few years since, the mice girdled quite a number of the trees badly, in the Baldwin orchard, and in order to save them, large scions were prepared and inserted in the bark below the wound and connected with the bark above, so that the sap might flow up from the roots into the top. The trees have done remarkably well and are good bearers; the scions having grown so as to form solid wood all round. In a few instances the roots were so badly mangled that four small trees were set out around the trunk, and the tops of them inserted into the bark above the wound. They have grown to a diameter of four to six inches, and support the original tree perfectly.

A young orchard, with a northern exposure, has recently been set, of several hundred trees, at the distance of fifty feet, each way, which is considered near enough. In a few years the ground will be shaded sufficiently, and as the land is designed to be under constant cultivation, the crops raised upon it will be more valuable. Between these are set peach trees, which come to bearing soon, and are out of the way before they will interfere with the apple orchard. The ground was taken up from a wild state, covered with stones and bushes, and, notwithstanding that two coats of the stones have been removed, the last plowing has brought up another, that of itself gives the field a most formidable appearance. In three or four years more they will all be removed, and a light, free and productive soil obtained, well adapted to the raising of roots and vines. Besides these orchards, there is an abundant supply of other choice fruits, such as pears, plums, quinces, &c., and extensive graperies, which I should gladly notice more particularly did my limits permit.

BREEDING AND FATTENING SWINE.—I have before remarked that Mr. P. is not, just now, doing much in the way of rearing swine; and of course I had not the opportunity of much personal inspection in this heretofore important department of his farming. His long and extensive experience in this business, however, entitles his opinions to much consideration; and a passing notice of them may not be without interest to some of the readers of the Cultivator.

His stock of swine, for several years past, has numbered about one hundred and fifty of all ages; and his slaughtered hogs have been celebrated, in Boston market, for their great weight and fine quality. Every attention has been paid to the manufacture of manure from this large stock, the pens being supplied liberally with peat-mud, and other materials for the purpose; in return he has received from this source some 500 loads annually of excellent compost.

He prefers the Mackay hog to all other breeds that he has known, for their early maturity, depth of carcass, and great weight in the more profitable parts, thinness and whiteness of skin, &c. By breeding in and in, they had become enfeebled in constitution, and it became necessary to cross them, somewhat, with other breeds in order to remedy the defect. He is now crossing them with the Suffolk breed, and, judging from the few specimens of this cross which I saw, I should say that it produces a hog of desirable properties in every respect. The Suffolks are remarkable for thrift, vigor of constitution, early maturity, &c., but have not quite the depth of carcass, I should think, of the Mackays. So far as my experience goes, I should consider this depth of carcass a very essential point. I have invariably found, in my pens, that a hog of great *roundness* of form does not, at killing time, open well. Another recommendation, as I consider it, these hogs are perfectly white. If the pigs are to be killed at the age of nine months, Mr. Phinney would advise that they be kept as fat as possible all the time; but if intended for killing at the age of fifteen or eighteen months, they should not be full-fed for the first ten or twelve months.

Upon this subject he says: "To satisfy myself of the benefit of this course, I took 6 of my best pigs, 8 weeks old, all of the same litter, and shut them in two pens, three in each. Three of these I fed very high, and kept them as fat all the time as they could be made. The other three were fed sparingly, upon coarse food, but kept in a healthy growing condition, till within 4 or 5 months of the time of killing, when they were fed as high as the others. They were all slaughtered at the same time, being then sixteen months old. At the age of nine months the full fed pigs were much the heaviest, but at the time of killing, the pigs fed sparingly for the first ten or twelve months, weighed upon an average, fifty pounds each more than the others. Besides this additional weight of pork, the three 'lean kine' added much more than the others to my manure heap. These results would seem very obvious to any one who has noticed the habits of the animal. In consequence of short feeding they were much more active and industrious in the manufacture of compost, and this activity at the same time caused the muscles to enlarge and the frame to spread, while the very fat pigs became inactive, and like indolent bipeds, they neither worked for their own benefit nor for that of others."

The pigs intended for killing at fifteen to sixteen months, are kept upon light feed for ten or twelve months, and in the summer green clover, cornstalks, weeds, &c., are thrown into the pens, daily. The remainder of the time, until slaughtered, they are full-fed upon Indian or barley meal, in equal quantities with potatoes, pumpkins or apples, the whole being thoroughly and nicely cooked and salted, and fed about blood-warm. It is considered, from repeated experiments, that two dollars worth of material, thoroughly cooked, will make as much pork as three dollars worth of the same material, given in a raw state.

Upon the subject of care and feeding, Mr. P. says: "On regular and systematic feeding, and clean and dry bedding, the success of raising and fattening swine very much depends. A faithful feeder, also, who has some skill and taste, and withal a little pride of vocation, is indispensible. Homer informs us that much of the success of Ulysses in rearing his fine hogs, was to be attributed to his faithful Umeus, whom the old soldier styled god-like swine-feeder."

THE IMPORTED STOCK OF THE MASS. SOCIETY.—In addition to twenty or thirty cows, kept for supplying milk for the city of Boston, is the imported stock and their offspring, belonging to the "Massachusetts Society for promoting agriculture," which are kept on this farm. This ancient and truly honorable Society, have set the rest of us an example worthy of all imitation. They have formerly spent thousands of dollars in the shape of premiums on field crops, the best cultivated farms, &c.; but finding this course too frequently attended with unsatisfactory results, from the fact that premiums were often sought after merely from the consideration of dollars and cents, rather than a spirit of enterprise in agricultural improvements—thereby giving rise, it is feared in too many cases, to the practice of deception—the trustees resolved to try a new and different appropriation of their funds.

They accordingly employed a competent agent in Scotland to purchase four cows and a bull each, of the Ayrshire and North-Devon breeds, the progeny of which are to be distributed among the several County Agricultural Societies, free of charge, on condition that they shall be kept in the county for the improvement of its stock. The oldest Society is entitled to the first choice of a bull and heifer of the offspring, and then the next oldest, and so on. These young animals are not allowed to go from under the care and supervision of the State Society, until they are of suitable age to be put to service.

The trustees are of opinion that for dairy purposes, there is no stock so well adapted to the soil and climate of Massachusetts, as the Ayrshire and crosses of them upon the common stock of the Commonwealth. Mr. Phinney says:—"From what I have seen and known of this and other imported breeds of cows, I am satisfied that as a dairy stock for New England, there is no breed in this or any other country so valuable as the Ayrshire. They are quite as hardy, and endure our cold weather as well as our native stock. They are of medium size, with enormous milk-vessels, and withal, a capacity for converting their food to milk much beyond any breed that I have known."

From the specimens of Ayrshires that I had seen before visiting this farm, I had not formed so favorable an opinion of the stock as Mr. Phinney expresses above; but I must confess that I was very agreeably surprised on viewing this herd. The cows are in every respect, fine models of what a dairy cow should be; their udders are very broad and reach far forward, with remarkably wide spread teats, and give every indication of being deep milkers. I was particularly pleased with the cow "Jennie Deans," a perfect model for the dairy, and a perfect picture, which it would be difficult for an artist to flatter. The celebrated cow "Young Swinley," purchased of Capt. Randall, of New Bedford, and whose dam "Swinley" "took more prizes than any cow in Scotland," is also a fine animal.

The North Devons will be great favorites with the farmers generally for their beautiful, deep, mahogany color, and fine silky coats, their hardiness of constitution, fitness for the yoke, and tendency to fatten easily. I do not wish to forestall the judgment of those more particularly interested, by a comparison of the two breeds, and therefore will not institute any.

It is truly fortunate that this stock has come under the care of one of so much skill and judgment, in the matter of their treatment. There is nothing like pampering or stimulating with grain at all allowed in feeding, a fact that I particularly noticed, being in and out of the barns frequently during my visit, but all the good hay they will eat up clean, and a generous mess of carrots, daily, is allowed to each animal. They are also kept perfectly clean; in fact cleanliness, and freedom from all waste of fodder, are the order of the day in every department at the barns. Regularity in feeding and milking is also strictly observed.

The calves are learned to drink milk fresh from the cow by the time they are a week old at the farthest, which is continued to them ten or twelve weeks. In the meantime they are encouraged to eat a little fine hay and nibble at a few carrots, which is of essential service in weaning them from milk.

I have said that the honorable board of trustees have set an example for us all to imitate. Here is certainly an object worthy the consideration of other State Societies; and I would particularly call the attention of my agricultural brethren in Vermont to the importance of the subject. We have now a State Society in embryo, with no definite plan of action before us, and why cannot something of this kind be presented and carried through? The State is, and must ever be, eminently a dairying and stock-growing region, and hence the importance to our farmers of an improved race of cattle. There is too much reason to doubt the utility of premiums as they are often paid out; because the statements of competitors are so defective, and generally so unsatisfactory, in establishing clearly defined facts of general utility. It seems to me, however, that in the improvement of the stock of a region, like that contemplated by the Massachusetts Society, money may be expended that shall prove of constantly increasing utility. There is evidently a deep and growing interest in the promotion of our agriculture, felt by men of intelligence and influence in all parts of the State; and it is to be hoped that a sufficient concert of action may be realized, whereby our State Society—availing itself of the *past experience* of the Massachusetts Society—may enter at once upon the improvement of this commanding interest. F. Holbrook.

Brattleboro, Vt., March 10, 1848.

"RUNNING OUT OF VARIETIES."

Under this head we published a communication in our March number from H. A. Parsons, Esq. Without intending to enter at this time into a detailed discussion of the subject, we think it proper to state a few of the reasons why we dissent from some of Mr. P.'s conclusions.

He is mistaken in supposing we had expressed the opinion that plants, under any circumstances, "do not degenerate." This is not our position; but we hold that plants have no *natural* tendency to degeneration. Mr. P. on the other hand, if we understand him, believes that all plants have an *inherent* tendency of this kind—that degeneracy results from an original, or constitutional principle. He thinks "the science of botany and vegetable physiology," prove that any plant continued from "the same seed on the same soil," will "degenerate till it becomes extinct."

That degeneracy may follow from growing a plant "from the same seed on the same soil," is not improbable; but does this consequence ensue from the natural decline of the species or variety to which the plant belongs, or from the exhaustion of the soil and unfavorable external influences? *This is the question.*

Let it be remembered that every plant requires its specific food; and that each successive crop, or generation of the same kind of plant, takes something from the soil. Hence it necessarily follows that this loss must be supplied, or exhaustion will follow; and as the food required by the plant is lessened, it is evident that the amount of produce will be lessened in a corresponding ratio. But is it proper to say that a decline of this kind, is the result of any law of "botany or vegetable physiology?" But though Mr. Parsons has told us that such a law exists, he has not told *what* it is, or where it may be found, as expressed or understood by those who believe in its validity.

It will be observed that the theory advocated by Mr. Parsons applies to "*any* plant," including not only those which are propagated by buds, bulbs, or tubers, but all others, whatever may be their mode of reproduction. But without any reference to the persons who have given credence to this theory, let us ask, is it sustained by facts? Is there anything within our knowledge connected with the cultivation or growth of grains, fruits or vegetables, which can constitute a basis for such a theory? Take wheat, for example. Some of the varieties held in highest estimation, are known to have been cultivated in the districts where they are now found, for several centuries; and a variety cultivated in Egypt, (the *Triticum compositum*) has been grown on the banks of the Nile for more than *three thousand* years. There are several facts that establish this conclusion; but the following may be taken as a *demonstration:* The ancient people of that country, sometimes placed small quantities of wheat in the embalmed bodies of their dead. In several instances wheat has been taken from mummies, which, from hieroglyphical records connected with them, were known to have been interred for the long period mentioned; and this wheat on being sown has vegetated, and been found to be identically the same kind as that grown in Egypt at the present day! How long a time is required for this kind of plant, "grown from the same seed on the same soil," to "become extinct?"

But Mr. Knight believed that some old kinds of pears and apples had become unprofitable on account of their constitutional decline. Were he now alive, he would have sufficient evidence that his theory would not apply to the kinds mentioned by him. The Autumn Bergamot is said to be the oldest variety of pear known, having been cultivated by the Romans two thousand years ago. Mr. Knight thought it was about to become extinct. In France and other parts of Europe it now does well, and in this country, according to Downing, it grows vigorously, and bears good crops. The Brown Beurré, St. Germain, Chaumontelle, and White Doyenné, (Virgalieu or St. Michael,) are all old kinds—some of them have been known for two hundred years—yet all produce well, in good soils, in this country, and are said to produce better in France than they did several years ago. The White Doyenne, which from having failed around Boston, was taken by some as an evidence in support of Mr. Knight's theory, is considered in the Genesee valley (according to a statement of J. J. Thomas, in the March number of the Horticulturist,) one of the most productive, hardy and healthy varieties there known.

Of apples, the Golden Pippin and Nonpareil are very old sorts, and were supposed by Knight to have "run out." The former has been cultivated for nearly two hundred years. It is well known that these kinds flourish well on proper soils in this country. We have seen the fruit of both varieties in the highest perfection; and even in England the failure in Mr. Knight's time was only partial, and by improved cultivation the former productiveness of the kinds has there been restored.

Take an example of another kind:—The common variety of red currant has been propagated by buds or scions from a time the memory of man goeth not beyond; and the same is true of several kinds of grapes, and also of roses. Have they any less constitutional vigor now, than at the earliest period of which we have any account of them? Where they are put on proper soil and receive proper training, they flourish well. How much longer must this system of propagation be continued, before the varieties will "become extinct?"

Mr. Parsons refers to the potato. He thinks the natural tendency of varieties to wear out, has already exterminated many, and that others are fast failing from the same cause. The non-production of balls he regards as an evidence of decline in constitutional vigor. Our observation would not justify this conclusion. Some of the strongest-growing and most productive kinds have never been much inclined to produce balls, (or seed.) This fact is well known, and the idea has been taken from it, that it is an advantage to pinch off the blossoms from those kinds which produce them, in order to prevent the energies of the plant from being exhausted by the production of seed, and throw more force into the production of tubers. This course has been considerably practiced in England. The Merino or Long-Red, an old variety introduced from South America about fifty years ago, has never produced but few balls, and its vigor and productiveness is remarkable; whereas the Mercer or Neshannock, a kind originated in Pennsylvania at a comparatively late period, and generally spoken of as particularly susceptible to disease, produces plenty of balls. A person in this vicinity has raised potatoes from the balls of this kind for two years in succession, and they have all been diseased. Prof. Norton informs us that in Scotland the "cups," and those "*kinds which bear no apples, are in general least affected*" with the disease.

The decrease of the potato crop from 1843 to 1846, is supposed by Mr. Parsons to result from "a general degeneracy of the varieties now in use." Everybody knows that the deficiency in this crop is chiefly caused by the "potato disease;" and the unavoidable inference, therefore, from Mr. P.'s language, is that the *disease* is the result of constitutional degeneracy, and that on this account the old kinds should be replaced by new ones, raised from seed. But does his own reasoning bear out the proposition? He cites the practice of farmers in Nova Scotia, "where," says he, "the finest potatoes were formerly grown." "They [the farmers of Nova Scotia] place little reliance on the introduction of tubers from abroad; their experience tells them that a reproduction from the seed-balls is the most sure and profitable. *And in no part of the world, probably, has reproduction been resorted to oftener than there.*" We have italicised the words composing the last sentence, because we wish that they should be particularly observed in connection with the FACT, (which we derive from a comparison of the various accounts given,) *that in no part of this country has the potato suffered more from disease than in Nova Scotia!* This is a sufficient comment on this point.

Again, if the disease was the result of constitutional weakness, should we not see evidence of such weakness in a feeble growth of the plant from the start? But instead of this it is certain that potatoes were never known to grow more vigorously, or present generally a finer appearance in their earlier stages, than in the seasons in which the disease has prevailed. The flourishing condition of the crop last season, up to the time when the blight of the tops first appeared, was the subject of general remark; and the growth of tubers was in most cases more than commonly great; but, with the exception of a few varieties, which from their hardiness were in a measure exempted from attack, those which the disease found in an *unripened state*, perished. According to Prof. Norton it has been so in Scotland. In general, he says. "the best crops on the best soil, have suffered most."

In examining the question as to the decline of varieties, we have compared many accounts from every part of this country where the disease is known, as well as those of the most authentic character from Europe; and it is certain that the evidence does not justify the conclusion that old varieties are most affected, or that any exemption in favor of new ones is exhibited.

The Highland Agricultural Society of Scotland, and the Agricultural Chemistry Association, have very thoroughly investigated this matter, and have collected a great amount of information, in the form of answers to questions which have been addressed to persons in various parts of Britain. Prof. Norton, in his essay on the potato disease, published in the Transactions of the New-York State Agricultural Society for 1845, has given the principal facts which the Highland Society had then collected on this point; all of which tended to show that varieties lately produced from seed, were as badly affected by the disease as any others. One man mentions that he had *sixty* varieties, only two to three years from seed, raised on his own farm, and they were all attacked with as much, and "in many cases more virulence than the older varieties." The information collected by the Chemistry Association is of a similar character. Twenty-five reports for 1845, state that potatoes recently raised from seed, were as much, and in many cases more affected by the disease than the old kinds; and only *two* individuals give it as their opinion that the new kinds have shown any exemption. The reports of the same Association for 1846, show still stronger against the assumption that seedlings have any superiority in resisting the disease.

We would not, however, discourage the raising of new varieties of fruits and vegetables. The greater the number of varieties, the better the chance of obtaining good ones by selection. But there is no value in new varieties merely because they are *new*, and we would not reject old ones, till we were confident they could be replaced by those which are *better*.

MANGEL WÜRTZEL AND CARROTS.—Dr. Thompson, who was employed by the Royal Agricultural Society to superintend some experiments in feeding stock, states that after trying mangel wurtzel for four successive years, he came to the conclusion that cows fed on it gave quite as much milk, but *much less* butter and cream than when fed on carrots or turneps; that when ewes were fed on mangel wurtzel the lambs did not thrive, owing to the poor quality of the milk.

A few years ago we had occasion to feed three cows during winter with several kinds of vegetables. We fed mostly with potatoes, giving each cow about a peck per day. On changing from potatoes to the same quantity of sugar-beets, the milk decreased, and was evidently of poorer quality. The beets were increased to half a bushel to each cow per day, and this brought up the quantity of milk to what it had been with the peck of potatoes; but the quality was still inferior, affording a less quantity of cream, and proportionately less butter, which was of a lighter color, of a less firm texture, and not so rich a flavor as that made while the cows ate potatoes. It is proper to say that about a quart of corn meal was given to each cow per day, through the whole trial.

WIRE WORM.—It is said that plowing late in autumn, and seeding two successive years with buckwheat, will destroy all wire worms in the soil. Another way is to summer-fallow very thoroughly, so as to starve them out, as they cannot subsist on the elements of soil.

DETAILS OF OPERATIONS IN FARMING.

EDITORS OF CULTIVATOR—In your remarks "To Correspondents, &c.," in your December number, wishing a continuance "of facts," relative to American husbandry, culture of corn, &c., &c., you say:—"The experience and observation of hard-working, common sense farmers is wanted." Now I am really in doubt whether I have a right to class myself as a "common sense *farmer*," (it being but five years since I commenced the farming business;) but I *do* claim to know something of "hard work," and never having furnished anything for the pages of "The Cultivator," I will now give you my "experience and observation," in raising corn, on "plain" or prairie land.

In the spring of 1845, I broke up with only two horses, about twenty-four acres of new plain. About one half was very *wet*, and the balance consisted of small spots or knolls, timbered with burr-oak. I had previously made a ditch from north to south, through the *lowest* parts, and plowed eastward so as to drain into the main ditch. I planted first week in May. It came up well, grew finely, and I had nearly finished working it the first time, when severe frosts, from 25th to 30th, cut it down, and to all appearance killed it. Seeing *all* my neighbors replanting, I, on the 1st and 2d day of June, run a plow between the rows, and replanted *on a line* with the former planting. In a few days most of the first planting started again; the balance of the season was good, and I harvested about fifty bushels per acre.

In the spring of 1846, I was enabled to plow much *deeper*, enlarged my main ditch and deepened my cross ditches, shoveling out on each side, thus making ridges of loose earth from fifteen inches to over two feet in depth. The corn on these ridges was much superior to the rest throughout the season, and when I gathered it I found the ears so large and fine, I saved them for seed. They had sixteen to twenty-two rows, and from eight hundred to one thousand, and some few over a thousand grains each.

In the spring of 1847, I had a very large pair of stout horses, and plowed from 8 to 9 and 10 inches on the landside, which left the furrows about a foot deep when plowed. This year I added three acres more of the timbered land, leaving the trees standing, (about thirty cords per acre) but girdled them; planted first week in May, three and half feet apart, without manure at any time; put 6 to 8 grains in a hill, which was at the first and second hoeing thinned out to four stalks. It came up well; the season was wet, cold and backward; the ground was so lumpy I could not harrow the young corn as I intended and generally do; weeds grew, but the corn was yellow. I began plowing and hoeing the last of May, when there came a very heavy freshet; the farm below me was not ditched, and I could not drain it; the water stood from a few inches to a foot deep on several acres. Full two acres was *killed out*, and about half of the whole remaining crop was much injured. On 10th June I began plowing the driest parts with mould board plows, and a *stout* horse at each, turning the furrows *from* the corn; and plowed *deep, up to the beam*. It required two hoes to keep up with each plow; after this working the injured corn began to grow again. Last of June cross-plowed again, turning the furrows from the corn, and *plowing as deep as a stout horse could plow it;* put three hoes after two plows and kept up. From 5th to 10th July, plowed third time, using long-pointed "shovel plows," with a swingle-tree but sixteen inches long—plowed still deeper, and brought up subsoil generally; one hoe kept up with each plow, running twice in a row. I like a shovel plow best—for the last plowing it cuts no corn roots, runs deeper, and leaves the earth more level and light between the rows. The season continued good, and the corn grew well until 12th September, when a hard frost killed all the green fodder, and slightly injured some of the corn. It was not sufficiently hard to gather until 10th October. Several persons told me it was the best piece of corn they ever saw. That injured by the wet never caught up with the other; that on the knolls was much the best, though the poorest ground. We have always estimated the field to contain thirty acres, three acres of which have never been plowed, and full two acres were killed out by wet—leaving twenty-five acres in corn, which includes the three of wood girdled, on which there was not over forty bushels per acre; and I husked out 2,573 bushels (shelled) sound corn, exclusive of small nubbins and soft ears, equal to 103 bushels merchantable corn per acre.

My potatoes have always been light, though planted on good soil. In the five crops I have raised, I never once got as many bushels per acre as I did of corn. Having planted them in April and first of May, I never had any to rot, though others complain much.

I mowed thirty acres of heavy timothy and clover, and made from sixty-five to seventy tons excellent *clean* hay.

My oats lodged and turned out slim. From five acres wheat, though much lodged, I got 142½ bushels, cleaned up, of excellent quality.

I killed forty-two fat hogs of my own raising, from twelve to twenty-one months old, and they averaged a little over 300 lbs. each; from which I put up full six barrels leaf-lard. In addition to pasturing my own stock of twelve head of cattle and five horses, I have received between $70 and $80 (the past season) for pasturing cows from the village.

You know that five years ago last autumn, I took this piece of land "in a state of nature," without fencing or clearing, except patches of plain, and without buildings or improvements of any kind—a log cabin of one room excepted. I have plowed altogether about seventy acres, and have fifteen to eighteen acres in plain pasture—the balance in wood, a part of which affords some grasses. My farm is, I believe, now rated higher per acre on the tax duplicate, including my buildings, than any farm in this county. In all my undertakings I have been my own director, manager and foreman, as well as a *laborer;* still I fear I have but slight claims to the enviable distinction of "a farmer," and am still desirous to learn of those who have had more experience or better success.

I am of opinion that the subsoil plow would be a great improvement on our plains. They are mostly broke up with but two horses, and very shallow, and a large portion of them frequently *covered* with water for weeks together in wet season of the year; but so long as these rich lands can be had from $6 to $12 per acre, and will produce fifty to sixty bushels corn per acre with poor plowing and poorer tending, (sometimes never plowed or hoed after plainting,) I fear the introduction of subsoil plows will be delayed.

I am pleased to say that an increased number of subscribers have been obtained here for "The Cultivator," and also for the "Horticulturist." Having been a subscriber for the former from its first publication to the present time, I feel that to it I am mainly indebted for the success that has thus far attended my attempts at farming, and also in building, fencing, draining, seeds, &c., &c. J. S. COPELAND. *Marion, O., Feb.*, '48.

AGRICULTURE OF VERMONT.

Editors of the Cultivator—I noticed that at the last meeting of the Oneida County Agricultural Society, Mr. Hithcock in his address, spoke of the prejudice that still exists against what some are pleased to call book-farming. Farmers, he remarks, communicate the results of their experience in raising cattle, the most economical mode of manuring their lands, &c. "These results being printed, constitute the book against which such untenable and unfounded prejudice exists." If the results of the experience of the great mass of our *practical* farmers were printed, we should, I believe, have books quite as useful, though very different, from some we now have. That there are many interesting articles in our agricultural papers, no one will dispute. Those of Prof. Norton are of a practical character, and cannot well be too highly prized. But to follow the rules laid down by most of the writers would ruin nine-tenths of the farmers of Vermont. Gentlemen of large property, or high salaries, owning from 50 to 200 acres of land near a good market, may farm it *according to the book*, and talk learnedly of "rural architecture;" but in the latitude of Vermont, where the pitch-fork is kept bright seven months in the year, and where the farmer possesses no other means for the support of his family than what he obtains by his own industry, he finds it very difficult to manage his farm *according to the book*.

Our farming, I fear, is coming too much under that influence which governs our common schools. There is now twice as much expended annually in the support of teachers and building elegant school-houses, as was expended for that object 20 or 25 years ago. The public treasure was never more lavishly poured out, and yet our district schools do not flourish. The difficulty I apprehend can in some degree be attributed to the sources from which we draw our knowledge. Our teachers are taken too exclusively from our high-schools and colleges, and few of them have ever entered a district school-house. They understand well the higher branches of science, but know little of first principles. Few of our *farmers* who write for agricultural papers, ever hardened their hands with hoe or pitchfork, or brought up the cows from a lowland meadow barefoot in a frosty morning.*

But a small proportion of the farmers of Vermont are now able to make very extensive improvements, and it would be unwise to involve themselves in debt in their endeavors to imitate their more wealthy neighbors. Let the improvements commence upon scientific principles and progress gradually, and most of our impoverished farms may be made to produce bountifully at an expense far less than would be necessary to clear up a new farm, and erect the necessary buildings to make a family comfortable.

There is a spirit of improvement in the management of the farms of Vermont which, if properly directed, cannot fail to produce great and beneficial results; and no common observer of the times can fail to attribute the awakening of this spirit to the influence of our agricultural papers; and notwithstanding I may appear a little opposed to *book-farming*, I should rejoice to see every farmer in Vermont a subscriber to the Cultivator. Yet until our population becomes more dense—lands dearer—labor cheaper, and farmers richer, farming upon the European plan cannot be profitably introduced or practiced here.

Our lands which were once productive, experiments have demonstrated can be made as productive, by proper management, as when first brought under the plow. The natural strength of the soil is first spent by the production of grain. To restore the strength of the soil requires the exercise of the faculties of the mind, and a change in the mode of farming. When and how this change is to be affected is the important inquiry—much more important than to know how a great crop of corn—a *twelve pound fleece of "well-washed wool,"* or a great calf can be produced. For a good soil, with an abundance of manure, with a good team, and a good *hired* man, will produce the corn; seven pounds of gum and grease will produce the *well-washed* fleece; and two good cows a great calf.

My attention was first called to this subject by the removal of so large a portion of our population to the west. From 1820 to 1830, the increase of the population of Vermont was 40,000, from 1830 to 1840 only 11,000, and this increase was mostly confined to the manufacturing districts. It is also very evident that very few of those removed, have bettered their condition, after all the privation and suffering incident to a new settlement. I have lived sixty years on the farm on which I was born, and have witnessed the change in the mode of farming during this period, and the manner in which that change has been effected.

This was once a wheat-growing country. It produced as good wheat and as abundant crops as any of the western States. By a constant cropping of wheat for nearly half a century, the soil became too poor to produce it, and crop after crop failed. We then tried meslins [mixed crops;] then clear rye, and became bankrupt under buckwheat. A change in the mode of farming—starvation, or removal to the west, was forced upon us. The farms in general had become too poor to produce grass, and the farmer is too poor by the failure of crops to procure the small amount of stock the farms would then support. The utmost economy and industry were necessary to produce this change. The change has been effected, not by compost, for this, if they had known its value, the farmer had not the means to produce. The change has been effected, and those fields which were once covered with wheat are now covered with sheep. Vermont is now a stock and wool-growing State.

It would be well for the farmers of Western New-York to look to the history of Vermont. For the same process is now going on at the West that I have witnessed here. Their fields will not always yield their crops of wheat, and it would be much better to change, in some degree, from grain to stock, before the strength of the soil is entirely exhausted.

But I leave the New-York farmers to manage their own affairs, and attend to the farming of Vermont, which was my design when I commenced writing. From our system of direct taxation, I have been able to obtain a collection of facts, which if carefully examined will, I think, check that fever which has carried off so many of our most enterprising inhabitants. Some have been too much influenced, I fear, by the reports of the large crops of wheat which the Western lands produce. Many are ready to believe that farmer is most prosperous who turns off the greatest amount of produce, without taking into consideration the relation the produce bears to the capital employed. The table of statistics which I have prepared, shows the relative value of the improved lands in Vermont, and the value of stock and grain. All buildings and lots adjoining, not exceeding two acres, were appraised at their true value in cash, and set in the list at four per cent.; and all *improved* lands were in like manner appraised and set in the list at 6 per cent. All kinds of stock at a certain rate—oxen at $2 each, cows at $1.25, &c. From these lists we get the value of the improved lands, and the number of all kinds of stock.

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* We think our friend Pettibone is under a great mistake in this assertion. We speak more particularly in reference to the writers for the Cultivator, of whom at least five out of six are men who "hold the plow," and handle both "the hoe and the pitch-fork." They belong to the same class with Mr Pettibone. They are men who have supported themselves and their families by the tillage of the soil—men whose good common sense has led them to adopt every suggestion by which their condition could be improved, whether it was received orally or from books.—Eds.

The value of stock and grain I have put at a price quite low, at this time, but near enough to its true value for the object I have in view—the relation the value of produce bears to the value of improved lands. The stock was appraised on the first of April—the hay, being consumed, is not estimated; nor is the value of the dairy put into the account. I have valued oxen at $25 each, cows $15, horses at $40, colts and young cattle in proportion. Yearling cattle were not appraised. I have put their number the same as two year olds. From this valuation, the stock, grain, and swine, exceed in value the value of the improved lands, without the buildings. The value of sheep at $2 each, with their wool on, exceeds in value any other kind of stock. The value of stock is to the value of grain nearly as 9 to 2.

I have also taken the value of improved lands, and stock and grain in the different counties; and I find the value of produce in a reverse ratio to the value of improved lands. Addison County improved lands are appraised the highest of any in the State, being $10 1-9. Caledonia County $6 per acre. Yet Caledonia County, with one-fourth less acres, and two-fifths less in value, has in value of stock and grain over $100,000 more than Addison County. The value of improved lands in Addison, Windham, and Caledonia Counties, stands

	Improved lands.	Produce.
Addison,	$10 1-9	$7.50
Windham,	7.34	8 53
Caledonia,	6.00	11.38

Addison County produces more hay per acre than any other County in the State. It produces about 112,000 tons, which will furnish at least twelve tons of hay to each acre of plowed ground. This with the straw and corn stalks, will make sufficient manure to keep the soil in a high state of cultivation, without resorting to artificial means of making manure.

The lands of Vermont, particularly the western and northern portion, are well adapted to grazing. The deep rich soil of the northern counties produces abundantly of hay and grass; and the numerous rivers which flow into Lake Champlain, by overflowing the intervales, spring and fall, keep these flats rich without the application of manure. The Otter Creek and Battenkill rivers, which run nearly 100 miles near the base of the Green mountains, overflow their banks annually. These intervales produce heavy crops of excellent hay without any manure. The pastures on the hills and mountains afford good range for cattle and sheep; and the hill and mountain pasture, though of little value for entire farms, when connected with the flats and intervale meadows, are nearly as valuable as the best lowland pasture. These rich hill and mountain pastures, can be purchased at from $3 to $8 per acre.

When we look at the low price of improved lands in Vermont, and their adaptation to the growth of cattle and sheep, we may as well expect a great outlay in making manure in Wisconsin as here. There are sections of Vermont that require more manure than can be made from stock, so long at least as the plow is used so much. There are less natural meadows, probably, in Windham County than in any other in the State; and that county is the only one that has, as far as I have been informed, offered a premium for the best heap of compost manure. There is, no doubt, more manure made in that County than any other in the State, or in all the other Counties. I have never seen a heap of compost in Addison County, which is considered naturally the best grazing County in the State. The value of stock there to the value of grain is eight to one. With all these natural advantages in favor of Addison, Windham County, with but 3,000 acres more improved lands, has 3,000 oxen, 4,000 cows and three year old cattle, and 200 horses, more than Addison County, and nearly twice as much grain.

These facts may, in the opinion of your able correspondent from Brattleboro, favor book-farming, while others, more intimately acquainted with the habits of the farmers on both sides of the mountain, will attribute this increase in the value of produce in Windham County to the industrious habits of the farmers on that side of the mountains; for there is, I think, twice as much labor performed annually by the farmers in Windham County, as is done by the same number of farmers in the counties of Addison, Rutland and Bennington.

But without going into the investigation of the comparative merits of different counties, if we look at the produce of the State as a whole, or by counties, it will appear that a greater value of cattle and grain is produced in Vermont, from the same amount of capital employed, than in any other State in the Union; and the amount of produce will, in the course of a few years, by means of the different lines of railroads now in progress, be doubled in value. J. S. Pettibone.

AGRICULTURAL STATISTICS OF VERMONT.

	State.		Addison County.		Caledonia County.	
	No.	Value.	No.	Value.	No.	Value.
Improved lands, 1,269,260 acres,...	....	$10,594,561	123,866	$1,262.935	90,969	$556,004
Buildings, house lots, &c.,.........	....	6.160.808	....	750,896	....	600.847
Mills and stores,....................	....	1,163,995	....	110.000	....	66.305
Oxen at $25	32,378	809.450	1,800	45,000	2.970	74.250
Cows and three year olds, at $15,..	141.767	2,150 720	11,656	174,846	12,204	183.060
Two years old cattle, at $10,......	45.016	450.160	3.227	32,270	4,173	41.730
Yearling do. at $5,................	45.016	225,080	3,227	16,135	4,173	20,865
Horses, at $40,.....................	51,762	2.070.480	4,451	178,040	4,674	186,960
Two year old colts, at $25,........	7,154	177,841	516	12,900	....	20,100
One year old do., at $20,..........	4,068	81,360	182	3,640	....	10.520
Stallions, at $200,.................	91	18,200	3	600	15	3,000
Jacks, at $100,.....................	24	2.400	....	....	....	....
Sheep, at $2,.......................	1,681.819	3,363.638	177,035	354.070	57,694	115.388
Swine, at $2,.......................	203.800	407.600	14,305	28,610	18.991	37,982
Wheat at $1 per bushel,............	465.800	465,800	31,322	31.322	57.694	57.694
Rye, at 50 cents,...................	230.933	115,466	11.427	5,703	1.800	900
Barley, at $50 cents,...............	54,781	27.391	255	128	12.291	6.194
Oats, at 25 cents,..................	2.222.584	555,646	141,794	35.448	362.433	85,608
Indian corn, at 50 cents,...........	1.119.678	559.834	96.304	47.652	52.350	26.175
Buckwheat, at 50 cents,............	228,416	114.208	7,219	3.609	1.205	6.002
Potatoes, at 12½ cents..............	8.896.751	1.112.094	440.097	55.012	1.066 848	158.331

Total value of the live-stock of the state, $9,756,939. Total value of grain $2,950,439. Value of live-stock in Addison County, $846,105; value of grain, $178,934. Value of live-stock in Caledonia Co., $693,855; of grain $340,855.

Average value of improved lands, with buildings, for the state, $14.90 per acre; average value of the same for Addison County $17.62½ per acre—without buildings, $10.11 per acre; average value of improved lands, with buildings, in Caledonia County, $13.50 per acre—without buildings, $6. *Manchester, March* 30, 1848.

AGRICULTURAL SCHOOLS.

THE subject of establishing institutions for giving instruction in sciences especially connected with agriculture, is attracting much attention. It has been a mooted question (in legal phraseology) whether *new* institutions should be formed for this purpose, or whether the instruction should be given in our present colleges. Prof. C. U. SHEPHERD, of Amherst College, in his excellent agricultural address, delivered last fall at Springfield and Northampton, made some observations in reference to this point. He thinks it the duty and interest of the landowners of this country to lay a broad basis for the scientific training of the rising generation—that the *elements* of the physical sciences should be taught in our common schools—and that there should also be established a "class of *higher* institutions for the preparation of teachers, as well as for the thorough education in practical farming of those who have before them the prospect of managing large estates." He proceeds to speak more in detail in reference to such a school as is required, and his observations, which we quote, are worthy of careful consideration:

"Many persons appear to think, that our college course can be so modified, as to fulfil at the same time, the literary and the agricultural requisition. · It does not appear to me that such a plan is likely to succeed. Heretofore most certainly, whatever else the college has afforded, it has turned out few practical farmers. Even those, who enter as well drilled and expert in farming operations, by the time they reach the terminus of their course, if they do justice to the college studies, and become thoroughly imbued with the spirit of the place, become rather awkward on the farm; and it soon begins to appear, that to be college-learnt, is to be farm-unlearnt. And I hardly know of men more to be pitied, than those who from feeble health or any other cause, have failed in a professional or literary career (to prepare for which the college course is chiefly intended) and who are obliged to fall back upon the farm for a livelihood. In all the practical labors of husbandry, they seem to have lost the art of taking hold of things by the smooth handle; and their blunders in live-stock, are almost sure to make them the laughing-stock of their neighbors. Now there is nothing surprising in this, if we consider the object of college education. The college is not intended for persons who are to occupy themselves much with physical matters. Even the boys understand this perfectly well; and it is to be feared that not a few importune their parents to gain admission there from no higher motive than to get clear of muscular effort; though it is generally observed that such are equally shy of intellectual exertion. No: the college is the place for the training of persons, who, if they are ever to work at all, must do so through the medium of mind, as scholars, as statesmen, as clergymen, or in the medical or legal profession. Nothing can be more unreasonable than to suppose, that we see the practical use of the sciences to mankind in the lives of our college graduates. Why, the college course is chiefly made up of the study of the literature and philosophy of the ancients, to whom our sciences were a dead letter, and of the elements of mathematics and geometry, to which is added a sprinkling of metaphysics and logic, and considerable drilling in English composition and elocution. On these studies and good morals, the discipline and the honors of the college turn. Lectures are given indeed on some of the modern sciences, but less with a view to their bearing on the arts of life, than to the purpose of intellectual discipline and general accomplishment. No teacher would be tolerated, who should more than incidentally allude to any common use, like that of economical profit, that could be made of them. The college is not the place for learning rules of thrift. It pre-supposes a degree of independence; and in cases where this is not enjoyed, it takes it for granted, that money-making is to be held as a secondary consideration with all who partake of its benefits. The college graduate is never to seek glory in wealth, but in knowledge, and in usefulness of a lofty kind to his fellow men. This I take to be the true theory of the college, and of literary life in general. Both hold themselves at the most respectful remove possible from all contact with matter, and the every day labors of men engaged in the arts. I might perhaps afford you an illustration of the truth of this representation. A president of one of these institutions on being shown through the physical department of another, the best endowed in natural sciences of any in the country, on taking leave of the distinguished professor, who had been his conductor, begged to know of what conceivable use to mankind were all such provisions! Here was a distinguished scholar, at the head of an American college, who had got so completely away from matter, as not to be conscious that a knowledge of its properties was of the least utility to mankind!" * * * * *

"The time has fairly arrived, when society should understand what it has a right to expect from the college; when it should know this at least, that it is not the most likely place to look for amelioration in the practical arts, especially in that of agriculture. The college has enough to do to qualify for head-work. There must be some other institution in which young men can be taught to work on matter as well as upon mind. To send a lad to college whom you intend to make a farmer, is putting him on the wrong track. The four years spent there would be an episode, a parenthesis in the preparation for active life on a farm. I say not that it would disqualify him from leading the life of a gentlemen, provided his means were sufficiently ample; but it would assuredly be a bad thing for him, ever to take off his gloves on a farm, after he had touched his diploma.*

"I should shrink from the attempt even, to draw out the plan of such an institution as is required to meet the wants of this greatest of all the branches of practical industry. To frame such a scheme will demand no small share of deliberation and forecast. No institutions are now in existence upon which they can be directly modeled."

We are happy to see that a bill has been introduced into the Senate of Massachusetts by Hon. J. T. BUCKINGHAM, for the establishment of the "Massachusetts

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* In these remarks upon the inadequacy of the college proper, for preparing persons for the practice of the arts, I trust that I shall not be thought wanting in a proper regard for these institutions. Having, either as pupil or teacher, passed the greatest part of my life in connection with the college, I can but accord to it the highest respect, and even filial affection; but this veneration is solely on account of the important and truly noble end it accomplishes, in laying the foundation of professional or literary eminence; and not on account of its direct service to the manual arts. These it never has embraced within its plan; nor is it easy to see how any change can ever be made in this respect, which shall fully answer the wants of practical men: although there is nothing to prevent the existence of an agricultural school in immediate connection with a college, whose scientific faculty might even assist in a school of arts, and in this way, materially abridge the expensiveness of such an institution.

Agricultural Institute." Mr. B. is Chairman of the Committee on Agriculture in the Legislature, and in submitting the bill referred to, he made an able report on the subject of agricultural schools in connexion with experimental farms. The same subject was also discussed at the weekly agricultural meetings held in Boston during the past winter. The general impression there seems to be that such institutions should be entirely disconnected with our present colleges and other literary seminaries. The Committee in the report observe:

"The project of establishing an agricultural school has, for many years engaged much of the public attention, and the committee believe that the time approaches, if it have not actually arrived, when the legislature may, with propriety, look upon it with favor, as a subject in which the honor and prosperity of the Commonwealth are involved. They have, therefore, found no difficulty in coming to the conclusion, that an institution should be founded forthwith, where agriculture may be taught as a science and practiced as an art; where new theories may be investigated and subjected to the test of experiment; and where principles, which have already received the sanction of successful practice, may be further inculcated and confirmed."

* * * * * *

"We know that the mass of those who, from choice or otherwise, follow the calling of the husbandman, are anxious to be supplied with all practicable facilities for obtaining the knowledge which will enable them to develop the resources of the earth, and to enjoy all the fruits which intelligent and scientific labor is capable of producing. And they appeal to the wisdom and liberality of the legislature to aid them in their efforts to institute a school, where agriculture, in its most extended sense, with all its kindred arts and sciences, may be taught, practically and experimentally, on a farm devoted entirely to that purpose, and without any connection with any existing academy or college in which a classical education is the prominent purpose of instruction."

The bill proposes to incorporate Edward Hitchcook, Wm. B. Calhoun, Sam'l L. Hinckley and their associates, as a body politic, for the purpose of establishing "in some one of the towns lying on the banks of the Connecticut river, or in a town immediately adjoining such towns, an agricultural school and experimental farm, with the above title, the object of which shall be instruction in agricultural science, and improvements in all the arts connected with the practice of farming."

A resolution is appended to the bill, which provides that, when the officers of the said Institute have obtained subscriptions in cash or real estate to the amount of $15,000, they shall receive from the State $5,000; and at the end of one year another sum of $5000; and at the end of two years from the date of the first payment, another sum of $5,000—"said sum to be used only for the purpose of carrying on experimental farming and instruction in the arts and sciences connected therewith."

Agricultural Papers.—A correspondent of the Ohio Cultivator, states the case of a farmer who lost $150 by neglecting to take that paper. He had taken it formerly, but concluded that he could do without it. After he had discontinued it, certain practitioners of Neurotomy on horses were traversing that State, and the paper cautioned the farming public repeatedly against the practice. But this farmer did not see these cautionary remarks, and suffered two fine horses to be operated upon, paying him ten dollars, which resulted in the entire ruin of his two horses. Farmers must not expect to be guarded against impositions, unless they inform themselves.

Diseases of Animals, &c.

Roup in Poultry.

This disease, frequently called in this country "swelled head," attacks both common barn-yard fowls and turkeys. The first symptoms are a watery fluid being discharged from the eye. The eyelids soon become inflamed and swell; and the swelling extends more or less over the head. A fetid discharge proceeds from the nostrils, which so obstructs respiration that the fowl is constantly sneezing and gasping. In bad cases one or both eyes are frequently destroyed. The disease is believed to be contagious, and as soon as a fowl is affected, it should be removed to some dry and comfortable place where there will be no liability of the malady being communicated to others. If many fowls are affected, it will be advisable to remove the whole of them, and wash their apartments with a strong wash of hot-lime. A writer in the English Agricultural Gazette, recommends as the best remedy, bathing the head with warm fomentations in which poppy-heads have been infused, and giving a preparation of goose-greese, (lard probably would do as well,) and chopped rue, mixed together—two tea-spoonsful for a fowl twice a day. For drink, the fowls are allowed water which has iron, or iron-rust and sulphur in it.

Medicines for Cattle, Horses, &c.

Mr. R. S. Ransom, of Perryville, N. Y., writes that he had found much benefit from the use of the cattle-medicines prepared by Dr. C. S. Toms. His "Russian liniment" for bruises and sprains, is said to be not only valuable for horses and cattle, but for the cure of rheumatism, &c., in the human race. His "condition powders" are highly spoken of. Mr. S. observes—"The above medicines, coming as they do from a good farrier, I much prefer to trusting animals in the hands of ignorant and conceited quacks." Mr. R. states that he is no way interested in the sale of the medicines, but from having known them used for a long time in the vicinity where he resides, is induced to recommend them for the benefit of the public.

To kill Lice on Cattle.

A correspondent of the *Mass. Plowman* states that the easiest mode of destroying lice on cattle, is to card the cattle till the card is filled with hair, then pour spirits of turpentine on the card, and card the cattle again—placing the card first on those places where the lice are most numerous. He says by following this course once in 3 or 4 days, the lice will disappear.

Leprosy.

The same writer as above mentioned, gives the following receipe for the cure of a disease in cattle called leprosy:

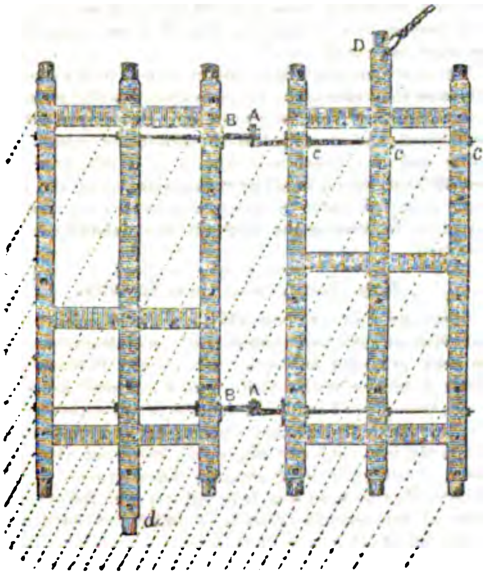
Put a piece of lime the size of a goose egg, into a tight vessel—pour in four quarts of hot water, and cover the vessel with a cloth—I do not vouch for the truth of it, but it is said to be better than when the vessel is left uncovered. When it has become cool, turn off the clear water, and wash the disordered spots two or three times with it, which is all I have found necessary to work a cure.

Heaves in Horses.—It is said that horses may be greatly relieved, if not cured, by the use of chopped straw instead of hay.

Sale of Hereford Cattle.—At a late sale of the herd of T. Cooke, Hereford, (Eng.,) one bull sold for £142, ($710.) another for £88, ($440,) a yearling bull £56, ($280,) and another for £52, ($260)—one cow for £70, ($350.)

HINGE HARROW AND CULTIVATOR.

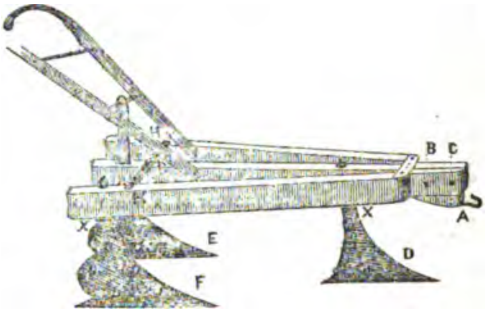
Messrs. Editors—At your request I hasten to give a drawing and description of my Harrow and Cultivator, to which allusion was made in my communication in your March number upon the culture of corn. I do not know who to credit with the invention of my harrow. It was made somewhere in Jefferson County, N. Y., I believe, and I bought it of a man from that section. It is by far the most effective harrow I have ever used; doing as thorough work at once in a place as the old-fashioned harrows will at three times—particularly if the surface of the ground is somewhat uneven.



Hinge Harrow—Fig. 41.

Description—The harrow is composed of two pieces of frame-work connected by hinges. The bars or stiles are 3 by 3 inches of white-oak timber, and connected together by slats as represented in the cut. The ends of the bars are rounded and secured from splitting by iron bands. The hinges A A go together like common barn-door hinges; they come to a shoulder against plates of flat iron nailed on to the wood-work at B B. The hinges pass entirely through the frame-work—gradually tapering—with nuts screwed on at C C C. There are two points of draft, D d, which is quite an advantage; because when the teeth get dull or dubbed off by constant use in the direction D, it is only necessary to hitch on to the other point d, and you have sharp teeth again. There are thirty teeth in the implement, and it harrows down very fine; and yet it will readily be seen that no two teeth are so near together as to be troublesome about clogging. My harrow is 5 feet long, and 5 feet 3 inches wide; with teeth of 3-4ths iron. For harrowing in grain and grass-seeds, it may be made lighter—say of some light, smart timber not over 2½ inches square, and the teeth 5-8ths of an inch square.

The annexed cut represents my Cultivator. It is a patented implement, by Woods, Bates & Wells, somewhere in the State of New-York. An agent for selling rights passed through this town a few years since and sold the right of making and vending for this vicinity to a fellow townsman. At my suggestion, he made some alterations in his patterns which I deem of importance. In the first place, the teeth are made longer from the frame-work to the ground, which obviates the objection of clogging, for now there is space for any impediment to rise along up the teeth and slip off, without getting bound in, at the point of contact of the iron and wood at X X. The space from the bottom of the wood-work to the bottom or sole of the tooth is 11 inches, while most cultivators have not a space of more than 6 or 8 inches. In the second place, the teeth are made fast in the frame with a large thread and nut on the top, the advantage of which will be hereafter noticed.



Cultivator—Fig. 42.

Description—The point of draft A, is the continuation of a wide, thin piece of iron, secured by two bolts B C; and by taking out the bolt C the point of draft may be raised or lowered,—thus altering the depth of the work—and other holes in the iron admit this bolt through it and make all fast. The forward tooth D is a double mould board. The teeth E F are single mould boards or miniature plows; and at weeding-time they are reversed, thus turning the earth and all large clods, that might otherwise roll over on to the young and tender corn, away from the hills, thereby enabling the holder to work up close to them without danger of burying them up. At the next hoeing, the teeth are replaced, as seen in the cut, and the earth is turned towards the corn. The frame may be expanded, or contracted, at pleasure, by loosening the nut and bolt at G, and putting through other holes in the straps of iron H H. As the frame work is expanded or contracted so must the points of the teeth E F be altered to correspond, or travel in a proper line; and it is only necessary to put them in the right direction, and then screw the nut on top down snug, and the teeth will be kept in their proper place. The points of the teeth are screwed on to the mould board the same as any plow-point is, and when they become worn may be taken off and new ones substituted. The cut represents the teeth as coming to a sharp point; but, in fact, they do not; they are squared off like a plow-point.

Brattleboro, Vt. March 28, 1848. F. Holbrook.

The oil of Birch is said to be used in Russia for tanning leather; particularly for the skins of sheep, goats, calves, &c. Dr. Holmes, of the Maine Farmer, states that the peculiar aromatic smell of this oil, which is very pleasant, has the effect to keep out moths and other insects. He suggests that as there are plenty of birches of various kinds in Maine and other portions of the northern section of the country, the manufacture of this oil might be made a profitable business.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Sickly Foliage and Iron.

Many observers must have noticed the pale and sickly appearance which plants sometimes assume when in a diseased state. The restoration of these to a healthy condition, by the use of salts of iron, has been accomplished in numerous experiments by EUSEBE GRIS, of Chatillon, in France. That the sickly condition of the plants operated upon, bore a resemblance to that of the *Yellows in the Peach*, as known in this country, may perhaps be somewhat doubtful; but the success attending his experiments, and the beneficial use of iron on some diseased trees in this country, are such as to lead to the belief that it may prove of important benefit. The attention of the public has been particularly called to this subject in the Horticulturist, by A. J. Downing, its editor. A brief notice may induce some of our readers to repeat or modify the experiments. The iron was applied in the form of solutions of its salts, the sulphate, chlorate, and nitrate of iron; the sulphate (copperas) being chiefly used, at the rate of 3 or 4 drams to a quart of water, if for watering the root; or at the rate of only quarter of a dram to a quart of water, if for syringing the leaves.

The experiments on plants in pots, where the solution could be easily applied to the entire roots alike, were eminently successful. Some species of *Pelargonium*, *Stachys*, and *Malva*, by two or three waterings of a gill to a pint each, entirely recovered their healthy green color in three weeks, though quite yellow at first; a *Diosma* required two months; and a *Pimelia* regained its color but imperfectly. In the open ground, the application to the roots is more difficult, and the results consequently more uncertain; but it was found, however, that a bush of the *Napaa levis*, very badly diseased, was quickly changed to a healthy state.

When the weak solution was applied directly to the leaves of such plants as are most quickly affected, a single application produced a renewal of the green in two or three days, wherever the solution touched them; and in one case of a very badly discolored geranium, "every line painted on the surface of the leaf by a brush, was rendered beautifully distinct through the intensity of the green color." For producing an *immediate* effect on diseased trees, syringing the leaves is considered preferable.

Very favorable results were obtained when the process was applied to sickly pear trees with discolored foliage.

It was remarked during these experiments, that when the solution was applied to the roots, and consequently ascended through the stem, branches, petioles, and midribs of the leaves, the parts of the leaves nearest the nerves or midribs were first changed in color, and the veins or minuter ramifications afterwards. On the contrary when the coloring was applied to *surfaces* of the leaves, the portions colored were distributed in patches without any relation to the nerves or veins.

The editor of the Horticulturist states that Dr. Reed of Poughkeepsie, applied iron in the form of blacksmith's scoria and cinders, to the soil about his pear trees, and the result was a remarkably healthy growth and fair fruit; his practice being founded on the fine condition of the pear tree in the iron district in the eastern States. He also says in a number published last year, "On learning, last autumn, with some surprise, the great perfection which the pear attains [at Plymouth, Mass.,] we applied to Mr. Washburn, one of the most successful growers there, for a sample of his soil. On having it analyzed, we find that this soil differs from other fertile soils chiefly in containing a much larger proportion of *oxide of iron*."

T. A. Smith of Syracuse, describes in the same work, a successful application of rusted iron turnings to the roots of a diseased peach tree, which soon restored it to health. The earth was removed from the roots; a peck of turnings applied, water poured on, and the soil replaced. This may be an over-dose; but the rust of iron is very slowly dissolved and absorbed by the roots. The disease was perhaps incipient *Yellows*, though this does not appear certain.*

These experiments may not uniformly prove successful—and they cannot be recommended with the confidence resulting from long practice. But they are easily performed, and may lead to important and valuable results, and are hence well worthy of a full trial. It should be observed in all new experiments of the kind, that safety dictates a commencement with a small quantity, increasing the dose till the desired effect is obtained.

Experiments and their Results.

EDITORS CULTIVATOR—With a little leisure, and yet without sufficient time to write an elaborate treatise on such profound subjects as "Potato Disease" and kindred themes, with which some of our craft are sometimes occupied, I send you a little of all sorts—pomological, horticultural, and economical. Please shovel this heap into your editorial mills, blow out the chaff, then, if any good seed remains, hand it over to your printer that he may sow it broadcast over the land. If some of this seed be of sorts of which you have sown enough already, you will of course reject it, or save it for next year. And if there should be danger that the sowing of such a diversity of kinds should produce cross-breeds, if sown altogether, you may distribute it to different departments of your editorial field.

I. Facts and Incidents in Planting Fruit Seeds.

1. APPLES—In the spring of 1846, I planted a load of apple pomice in a good soil and with care. Not a seed ever grew either that or the next year. *Error:* The pomice was just sprouting when it was brought home. The disturbance ruined the seed.

2. PLUMS—The same spring I planted two or three quarts of plum stones that had been buried in earth in the garden all winter. Not a seed ever sprouted. *Error:* They were just sprouting when dug up. *Query:* Do plums always suffer thus when planted under such circumstances?

3. CRANBERRIES—May 24th, 1847, I planted thirty square rods with cranberries. (*a*) *Seed*—Some of it was cleansed from the pulp in early winter and kept in sand in the cellar. The remainder was prepared on the day of planting by rubbing the berries in the sand in which they were planted. The fruit had been fine. (*b.*) *Soil*—The ground was a swamp muck combined with sand, drained dry three years ago and well cultivated since, but without any manure. Soil as fine as a garden. (*c.*) *Mode of planting:* The ground was first marked out for turneps, and that seed sown. The cranberry seed was then planted in alternate rows, at

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* One of the most infallible proofs of *Yellows*, is premature ripening and discolored flesh of the fruit; an indication however probably too late for a remedy.

two feet apart in the row. (*d.*) *Results:* Not a seed was ever seen to grow. *Query:* Was this ground too dry? I have sprouted these seeds in my house in a cup of black swamp earth kept constantly wet. Is this essential to their germination?

4. MOUNTAIN ASH—I have twice sowed these seeds. In one case the seed has been taken from the fruit in the fall, and kept in the cellar through the winter; in the other, the berry was burried in sand in the garden. *Result:* Not a plant grew. Can some of your correspondents tell me how I failed?

II. Grafting.

1. PEARS ON MOUNTAIN ASH, in May, 1847. The stocks were procured in the fall of 1845, from a swamp, and were planted in a dry sandy soil, made rich with a compost of muck and manure. In the fall of 1846, nearly two-thirds of them were found fatally injured by the common white grub, which had penetrated the tree just beneath the soil, and had worked upward, in some cases nearly two feet. Of those that escaped, sixteen were grafted with the Virgalieu Pear in the spring of 1847. They all but one started finely, and grew well until the middle of summer, when seven of them died, somewhat suddenly, without appreciable cause.

2. GRAPE GRAFTING IN 1847—(*a.*) *Mode:* I sawed off the stocks 3 or 4 inches under ground, cut the tops smooth with a knife, split, and then put in the graft, usually with two buds upon it, cut to a wedge. When the cleft was weak I tied it firm with bass. About one half were clayed, though with no perceptible influence on the results. They were sheltered from the sun by a shingle. (*b.*) *Kinds and Results: Black Hamburgh*, two, in good Isabella roots—both died. *Golden Chasselas*, six, in roots as above—three lived, making wood from three to five feet; some with six or eight vines. *Royal Muscadine*, two grafts—one of which (a poor one) died. Wood too. *Early Black July*, about twenty-five grafts in Fox grape stocks, with strong roots. About one half lived, a few just living; but the most of them making four or five feet, one seven feet. of wood, with numerous vines. (*c.*) *Error:* I did not obey the instructions of those writers who say, "wait until the leaf is nearly fully expanded" in the case of summer grafting. Nearly every stock bled profusely. I should undoubtedly have gained by waiting one week. As it was, I think the bleeding of the stock prevented granulation until its top, and the graft too, were dead. *Query:* Would it not be better in this northern clime to graft early in the spring; especially when it is considered that the wood was, in this experiment, so immature that the first severe frost (Oct. 16th) greatly injured the young wood, killing it down almost to its origin. (*d.*) *Position:* The three first sorts were under the protection of a high board fence. The last were in the open field.

3. GRAFTING GRAPE CUTTINGS IN 1847. (*a.*) *Object:* The object is the same as in grafting, that is, to give vigor to tender grapes by putting them on strong native sorts. (*b.*) *Mode:* Take two cuttings, as the *Catawba* for the hardy sort, and the *Sweet Water* for the tender; have them of nearly similar size. Pare off one side of each, a little above the centre, on the side opposite the top bud of each, cutting the vines almost to the pith, making the wound very smooth, and about two or three inches long. Bring the flattened surfaces accurately together, securing them well with bass or yarn, either of which will rot soon enough. Then plant the cutting in the usual mode. (*c.*) *After treatment:* Let both buds grow for two seasons, at the end of which it may be presumed the union of the two cuttings will be perfect if ever. Then cut away the wood of the strong vine, giving the tender one the enjoyment of the double root. I have about thirty such grafted cuttings in progress. I have made no examination of them to ascertain whether there is an actual union of the two cuttings. (*d.*) *Supposed gain of this mode:* There is less difficulty in *timing* the operation than in grafting, and probably less danger of failure. But it will take another summer to settle the question of feasibility and utility.

III. Purification of Melon Seeds.

Few fruits are more acceptable in their season than melons. But if there be any other seed in the purchase of which the gardener runs so much risk, I know not what it is. And yet it requires but little labor, in the cultivator who has room, to keep melon seed pure, or to cleanse it when it becomes mixed. Those who have not abundant room, may raise a great variety of good melons the first year if they have good seed to start with, but they must not expect to do it the second year without a change of seed. It may be here premised, that melons kept pure exhibit very little change in shape and appearance, being, in this respect, among the most constant of fruits; nor yet do they change much in quality or flavor in successive years, if the seasons are favorable. The names of melons occurring in this article are used as I find them here at Utica. I make no pretension to learned accuracy.

Experiments with mixed Seed—1st. In the spring of 1844, I planted the Green Fleshed Citron Melon. As it ripened in August it exhibited an intermixture of the Honey Melon. By carefully selecting my seed from such hills as seemed to have no Honey Melons in them, I have succeeded in perfectly purifying this seed. 2d. In the spring of 1845, I obtained some seed of the Skillman Melon from Albany. It produced three sorts of melons—a large round, very early, and tolerably good Yellow flesh—a long oval Green flesh of fair quality—and a small flattened Green flesh of excellent quality, very nearly identical with the New Jersey Rock Citron, though a little earlier. 3d. I have tried another experiment, which is too long for detail here, in which I succeeded in separating from *a single melon*, presented me in the fall of 1845, three distinct varieties of Yellow flesh, one of White flesh, two of Green flesh, and one of pumpkin or squash—in all seven, two of which I shall continue to cultivate. The others are not sufficiently valuable to be perpetuated, especially as I have others quite as good.

I think it evident from the foregoing facts, that the intermixture of melons, and probably of all classes of plants called popularly *vines*, is not very intimate, since they are so easily separable. Persons who forward their vines under glass, and keep them covered until the fruit begins to set, may always secure good seed by artificially impregnating the early sets. I have done so, nearly invariably for some years. The labor is small compared with the advantages. The mode of doing this, though described in the books, is seldom practiced. It will bear repetition. In the morning, as soon as the dew is off, collect a few staminate blossoms, in such as have long stems, and never exhibit an embryo fruit below them. Then search your vines for the pistillate flowers, i. e. those with short stems, and having a small hairy fruit below them. Having found a pistillate flower just open, take a staminate one between the thumb and finger of one hand, while with the other you carefully pull off the leaves of the flower, being careful not to disturb the organs in the centre of it. Now take hold of the pistillate flower with one hand while with the thumb and finger of the other, you gently twirl the prepared staminate flower which you have at hand just within it. The object of this operation is to sprinkle the dust of the staminate flower, upon the central portions of the pistillate ones. This being done successfully, the pistillate flower will soon begin to enlarge, while, if unsuccessful, it will turn yellow and die. One thing should not be forgotten—staminate flowers are not only much more numerous than pistillate, on all sorts of vines, but begin to appear one or two weeks earlier, and are most numerous the whole season.

IV. Choice of Melons.

He who has once tasted a good Green Flesh Melon, will rarely long for a Yellow one. "But of the *Green* which are the best?" I answer that between the Green which I have cultivated, there is but little room to choose in regard to flavor. Yet to the cultivator it is important to make a wise selection. The *Persian* is a little the earliest, and requires the most care, as it should be watered almost daily in a dry season. Its fruit also fails rapidly in quality on the approach of autumn. The *Skillman* is somewhat liable to crack and rot, especially in wet weather. The *Honey* Melon is too small for a market melon. The *New Jersey Rock Citron* is the latest melon we have, and therefore it is not so eligible as some others. The *Citron* remains to be noticed. It is usually the largest of all fine Green flesh, is more uniformly good in all seasons, and holds its qualities at the approach of autumn far beyond any melon of my acquaintance; often presenting a bright green luscious flesh when all others have become pale and vapid. I have said nothing here of the Minorca. When ripened in very hot weather it is often of fair flavor, but it so uniformly cracks before it is ripe, and so loses all flavor at the first approach of cold weather, that I consider it worthless; though to the eye it is the most magnificent of all Green melons, sometimes reaching with me the weight of nine and a half pounds.

I have said nothing of the *cultivation* of the melon. That, in so cold a climate as that of Utica, would alone become the subject of a long article.

I subjoin a description of the principal melons referred to above.

1. The *Honey*, very small, white, round, smooth; very thick meated, of most delicious flavor.

2. The *Skillman*, as purified in my hands, is small, flattish, has moderate sutures thickly netted on a green ground. (3.) The *Rock Citron* is much like the Skillman, only with deeper sutures, and more variable in size.

4. The *Persian* is oval, with a slight neck, thinly netted, on a green ground, which approaches a yellow when ripe. Its flesh is a little thinner than that of the preceding kinds, and not so deep a green. It has moderate sutures, and is larger than any of the preceding kinds.

5. The *Citron*. This melon is bluntly oval, larger than any other Green Flesh, except the Minorca, usually moderately netted, on a deep green ground, which changes but slightly as it approaches ripeness. It has a very obscure suture.

I think the community are greatly in danger of being gulled in the recommendation of melons. Should a pomologist make the tour of Persia, Afghanistan and Egypt, he could not find melons which, when brought home and cultivated here, would be superior in flavor to almost any one of the fine good varieties noticed above. He who wisely cultivates them in a hot sand, in a warm and long season, will have fruit as rich as a *Peach*—as rich *as can grow* in this country. Ordinarily they should be forwarded in a hot bed, so that they may ripen under a July and August sun.

V. Melon Squash.

This is a hybrid between the Green Fleshed Melon and the Seven Years Pumpkin. The latter, for some reason, had not with me answered its character abroad either in the richness of its flavor, or in its duration. In the July of 1844, I impregnated about fifty of its pistillate flowers with the staminate of some of my varieties of the Green Flesh, although I did not notice which. The flowers were covered carefully with paper, immediately after impregnation, to exclude bees and flies. About six or eight were successful. The fruit was not altered in size and appearance that year, but the seed was, as it became thicker and more stubbed than the original seed of the Seven Year Pumpkin, while its color became exactly that of the melon seed. In 1845 I planted seed from four specimens that seemed most changed by the crossing. In consequence of very dry weather and neglect, all these failed but one. This one produced largely. From its crop I selected a few specimens that combined the Nankin Yellow and pale Blue of the Pumpkin with the knotty and netted appearance of the Melon. These and others like them were planted in large quantity for market in 1846 and 1847.

The *Result* is a rich, thick-meated Squash, (or *Pumpkin* if you please,) much richer than its Pumpkin parent, with a yellow, almost red, flesh. This Squash is not so long a keeper as the Pumpkin from which it was derived, but is to me a more valuable variety.

I remark on Squashes, as I did upon Melons, that the public are perpetually amused with intelligence of new and extraordinary varieties. Mammoth Squashes are valuable only to look at. For the table they are comparatively less valuable than "Still fed Beef." Any one who has a rich spot of moist ground, can grow a mammoth Pumpkin; but when grown it is far less valuable and deserving of a "State Fair Premium" than a great crop of corn. The true *Valparaiso Cheese* and *Winter Crook Neck*, and my Melon Squashes are, I apprehend, as rich and valuable varieties as our climate can ever produce. They have the advantage of moderate size, and this is not a small one either to the cultivator or the consumer. Let us hold on to them, and discard new varieties unless they are recommended by an old wholesale cultivator in the most unqualified manner. In the hands of a tolerably careful gardener, Squashes need never run out. A good corn season will almost always give good winter Squashes, if they are planted early so as to mature, like the Melon, *in the very hottest weather*, or if not absolutely to *mature*, at least to get the most of their growth during this season. Squashes are sometimes rejected because, being planted one season, they fail. I had a valuable Squash that was not eatable in 1840 and 1841, which, both before and since, has been very fine.

Improvement of Varieties.

A writer in the Gardener's Chronicle gives some interesting results of experiments in improving the varieties of vegetables. He began with long pod beans. He took for seed, none with fewer than five seeds in a pod. The following year there were many six seeded pods, and some with seven. Still selecting the best, he procured many six and seven seeded pods, and some with eight. In this way new and distinct varieties were formed; for while some remained with five seeded pods, it was found that they rarely had a six seeded pod upon them; while those with six seeded pods were nearly all so, and some seven seeded. New varieties are only produced from seed; hence the importance of a constant care in selection in all crops which are annually reproduced in this way. A skilful market gardener in Western New-York, by constantly selecting the earliest seeds of the Washington pea, in a few years had them more than a week earlier than his neighbors, who had cultivated the same variety. Plants not reproduced by seeds, as the potato by eyes or tubers, and fruit trees by grafts and buds, remain perfectly unchanged for ages; for this is only a continuation of the same original plant, which cannot change its own being.

Insect injurious to the Grape-Vine.

CHAS. W. MULFORD, of Rensselaerville, N. Y., has sent us some insects which he states are very destructive to the grape-vine. He says:—" They commence their ravages in the spring, as soon as the grape buds begin to swell, eating a portion of each bud, and so maiming as to destroy its growth. They continue to destroy the buds as fast as they appear, till about the end of June, when they begin to disappear. My father has a vine which has borne upwards of two bushels of excellent Isabella grapes annually; but for the past two seasons it has not borne a single grape, and indeed has not shown its leaves till July, from the fact that its buds are destroyed up to that time by the insect. After the leaves show themselves, they are much eaten throughout the season by a minute worm or slug, but whether this has any connection with the former insect, I have not examined sufficiently to determine."

The insect sent us is a species of beetle, of a greenish black color, about a fourth of an inch long and an eighth of an inch wide. Its name we have not ascertained. We have never known such an insect to prey on the vine, and cannot say whether the slug spoken of is the larva of this beetle or not. As to a remedy against their ravages,—our correspondent states that the beetles were found in great numbers among the dried leaves under the vines, and these might, of course, be destroyed by raking them up with the leaves and burning them. Syringing the vine with tobacco water, fumigation with tobacco or sulphur, scattering over the buds and leaves air-slacked lime or plaster, might destroy the slugs, and perhaps keep the bettles away. *

Destruction of Fruit Buds by Frost.

The destruction of the buds of peaches and other tender fruits frequently occurs in this latitude, under severe cold. It has been remarked in peach growing neighborhoods, that whenever the mercury falls below zero for several days, the fruit buds are killed. It is probable, however, that the precise *degree* of cold which is required to produce this effect is not generally known. It is generally supposed that the destruction depends somewhat on the *continuance* as well as on the degree of cold. For instance, it is thought that five nights with the mercury at zero may cause as much injury as would one night with the mercury at ten degrees below zero.

C. H. Tomlinson, Esq., of Schenectady, has paid muce attention to this subject. The substance of his observations, as communicated to the writer in a late conversation, may be given as follows:—That when the mercury for only one night falls to zero, a few peach-buds will be killed; that when it falls to four or five degrees below zero for the same time, a larger proportion of the buds are killed; and when it falls as low as twelve to fifteen below, a "clean sweep" is made of the buds of the peach, nectarine, apricot, &c.

The question has been raised whether, if the ground was prevented from freezing by snow, the same degree of cold would produce the same injury to the buds. Mr. Tomlinson has made some observations on this point. Several years ago there fell a deep snow before the ground was frozen at all, and where the snow remained undisturbed the ground did not freeze under it. Of course the roots of trees were in unfrozen ground. While this state of things existed, very cold weather occurred—the mercury falling to ten degrees below zero. The usual consequences followed—the peach-buds were generally killed. In some instances the lower branches of the trees were buried in the snow, and on those branches the buds were saved, blossomed, and produced fruit the succeeding season.

The morning of the 11th of January last was remarkably cold—the mercury, in this neighborhood, ranging from 18 to 23 degrees below zero. Mr. Tomlinson states, the fruit-buds of the trees above-mentioned, around Schenectady, were all killed at that time. A good illustration of the appearance of peach-buds when killed by cold, will be found in the Cultivator for 1846, page 183. *

Singular Circumstance.

At Wyalusing, Bradford County, Pennsylvania, many years ago, a thrifty young apple tree was innoculated with buds of the Golden Pippin—three branches, changing the whole head. When the tree began to bear, it was found that one of the branches ripened its fruit *in July*, and the others in October—all Golden Pippins. Many persons applied for grafts of the early branch, but the owner discouraged them; supposing that the cause of this singular variation existed in some defect of the stock *in that branch*, and that grafts taken from it would possess no property different from the original Golden Pippin. However a son, having less faith in the stability of natural law, tried the experiment privately, and on the third year brought in seven early Golden Pippins from the new graft. We now suppose that in this new way a new variety of early fruit is added to our stock as much superior to other early apples as the fall Golden Pippin surpasses them. Scions of this singular variety have been sent to Tharps' Nursery, Binghampton, New-York, where inquirers may obtain it. C. F. WELLES. *Wyalusing, Penn.*

Culture of the Blackberry.

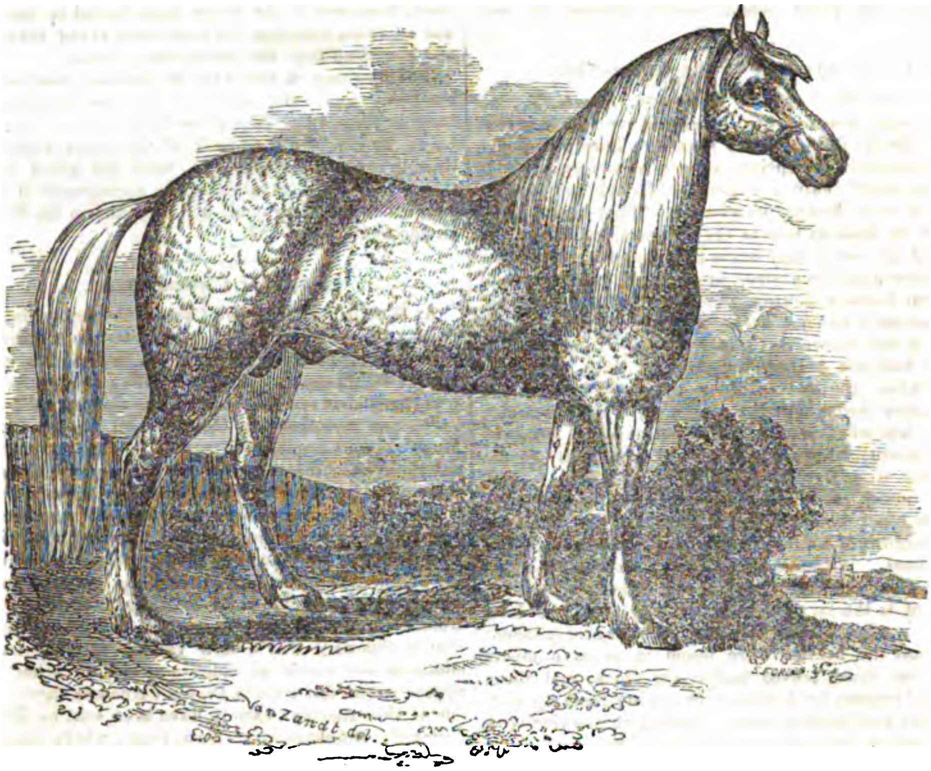
Having seen an inquiry respecting the culture of the blackberry, I will send you the method which is practiced by a friend of mine, who has a beautiful hedge which produces a great abundance of this excellent fruit.

The plants are set out in rows four or five feet apart, and are kept free from weeds and grass through the summer; in the fall these spaces are filled with leaves from the forest. The next spring a quantity of ashes is strewn between the rows—these with the leaves are all the means used to secure a beautiful harvest every season. W. H. *West Bethel, Vt., March* 28, 1848.

THE WHITE DOYENNE, or *Virgalieu Pear* in Ohio. C. Springer, well known as a cultivator of fruit in Muskingum County, Ohio, says, " The White Doyenné pear is the only grafted variety, out of several kinds, planted eighteen years ago, that has sustained itself against the blight. It is a regular and plentiful bearer, and among the very best of pears."

PROFITS OF FLORICULTURE.—M. P. Wilder, President of the Mass. Hort. Society, raised two new varieties of the Camellia, of such unsurpassed beauty, that he sold the stock of these two seedlings to J. L. L. F. Warren, for *one thousand dollars*. They were taken to Europe, and sold for about *fifty dollars a pair*, to the amount of nearly *three thousand dollars*. This will not appear so extravagant, when it is remembered that by a few years' increase, these purchasers may dispose of the increased stock at ordinary prices, and make a handsome profit on their purchases.

PEARS.—At the autumn exhibition of the Massachusetts Horticultural Society, R. Manning exhibited two hundred and fifty varieties of pears, and M. P. Wilder, the President of the Society, exhibited a hundred and fifty varieties.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THE NORMAN HORSE.

The above engraving represents the Norman horse, called *Louis Philippe*, bred by Edward Harris Esq., of Mooerstown, N. J., and now owned by Mr. R. B. Howland, of Union Springs, Cayuga County, N. Y. He was foaled in 1843. His sire and dam were selected in France by Mr. Harris in 1839.

The origin of the most esteemed variety of the Norman horse, is said by French writers to have been a cross, made several hundred years ago, between the celebrated Andalusian stock of Spain, and the old Norman draught horse. The Andalusian was derived from a cross of the Arabian or Barb, introduced into Spain by the Moors during their occupancy of that country from the eighth to the sixteenth centuries. No breed in Europe, is more fixed in its characters, or transmits its peculiar traits with more certainty, than the Norman.

This is the variety of horse which is preferred in France for drawing the ponderous stage-coaches called "diligences," and travellers, on passing through the districts where they are used, frequently express their astonishment at the performances of these animals. We have been informed that each of these vehicles is calculated for carrying eighteen passengers at once, and that when thus loaded they are equal to five tons' weight. Five horses (all stallions) are, with rude harness, attached to the clumsy and cumbrous carriage; and their regular rate of movement with this enormous load, is seven miles an hour. The pace is generally kept up over the various acclivities, but occasionally, when a very long hill is to be ascended, an additional horse or two is added to the team.

On some routes the loads are lighter, and the pace is there quickened to eight or nine, and in some instances to ten miles an hour.

Mr. Harris was induced to import this valuable breed of horses from having become acquainted with their qualities during a residence in France; and Mr. Howland was also led to make the purchase of one of this stock from having been convinced of their great superiority, for many purposes, by seeing them in their native country.

Perhaps a better description of this breed cannot be found than has been given by a writer in the twelfth volume of the Scottish Quarterly Journal of Agriculture. He says:—"The horses of Normandy are a capital race for hard work and scanty fare. I have never seen such horses at the collar, under the diligence, the post-carriage, the cumbrous and very heavy voiture or cabriolet for one or two horses, or the farm cart. They are enduring and energetic beyond description; with their necks cut to the bone they flinch not; they put forth all their efforts at the voice of the brutal driver, or at the dreaded sound of the never-ceasing whip; they keep their condition when other horses would die of neglect and hard treatment.

"A better cross for some of our horses cannot be imagined than those of Normandy, provided they have not the ordinary failing of too much length from the hock downwards,[*] and a heavy head. It is very doubtful whether the infusion of much English blood among the Norman breed will be serviceable. I have seen many bad productions in consequence of this crossing, chiefly loss of weight and strength in those points where the draught horse should excel."

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[*] Mr. Howland's horse is by no means faulty "from the hock downwards," and we have been informed that his sire, *Diligense*, and the mares imported by Mr. Harris, have not this defect. Mr. Youatt's observation in regard to the cross of the Norman horse with English breeds, is worthy of notice. "The English roadster and light draught horse has not suffered by a mixture with the Norman horse."

MANUFACTURE OF CHEESE.

AT the January meeting of the New-York State Agricultural Society, 1848, Mr. ALONZO L. FISH, of Litchfield, Herkimer County, received a premium of fifty dollars, for an account of experiments made by him in the manufacture and management of cheese. Mr. F.'s valuable essay (as it may be called) is embodied in the elaborate report of the committee appointed by the Society to examine the claims of competitors under this head, and will be found in the volume of *Transactions* for 1847, when published. We think the following extracts from Mr. Fish's remarks, will be read with advantage by those of our readers who either are, or expect to be, engaged in cheese-dairying.[*]

Having been personally engaged in 1845, in some 60 dairies, which were located in thirteen towns and four counties, and more or less in the same manner the past two years, I have observed a marked difference in the capacity of soils for producing herbage, under different modes of culture, and the various conditions and treatment of cows, affecting their capacity for milk, both as regards *quality* and *quantity*. The inconvenient and improper fixtures, in many instances, for making and curing cheese, which are to be found, all unite in convincing me, that any set rules for making cheese would not be practicable, even with the most proficient cheese-maker; because,

In the first place, milk is a fluid very liable to be varied in quality by impure water, by damp and unventilated stables, change of diet, excess of feeding, excitement of temper, irregular milking, salting, &c., which destroy its susceptibility to produce like results.

2d. Cheese, when pressed and exposed in a *curing process*, is no less easily affected, and is equally liable to be varied in texture and flavor, by size of cheese, exposure to excess of heat, bad air, &c., the effect of which I shall hereafter notice. There are, however, leading principles which form the basis of operations, and should be closely adhered to, *in all cases*, in the process of manufacturing cheese. *Salt, Rennet, heat* and *pressure*, are the principal agents used in converting milk into cheese, the flavor and texture of which is determined by their proportionate use. Their proportion is varied by different dairymen, according to their notions of propriety, as best adapted to their fixtures, experience, &c. Hence arise the great inequalities in dairies, in the same neighborhood, and even in the same *dairy-rooms* may be found as many different qualities of cheese as there are of fruit in an apple orchard. Some of these are matured at an early period, while others mature later, and are unsuited to the same market.

Much of the cheese being contracted for before it is made, (in the early part of the season) both buyer and maker are liable to be disappointed, in the cheese being suited to the market for which it is designed, destroying the confidence of purchasers, and injuring the interest of the dairymen. It is therefore necessary, that makers should have sufficient knowledge of the science to determine the result of their practice, which cannot be learned from verbal instruction. It is by *practical experience and close observation only*, that the maker can learn to adapt his practice to the frequent and extreme changes to which our climate is subject, varying the quality of the milk, and materially affecting cheese in the process of curing.

The evening's and morning's milk is commonly used to make one day's cheese. The evening's milk is strained into a tub or pans and cooled to prevent souring. This is done by running water through a vessel set in the milk, or setting pails filled with cold water into the tub, and stirring till cool; but little cream will rise over night.

The cream is taken from the evening's milk, and kept till the evening's and morning's milk are put together, and warmed to receive the rennet. This is often done by heating a part of evening's milk to a temperature that will warm the whole mass. Both are objectionable, *because the natural affinity which is necessary to preserve between the constituent parts a perfect coherence*, is destroyed, by a portion of the milk being overheated. It is better to warm the whole mass in a manner that will produce an *equilibrium of heat*, which is best done by placing the vessel containing the milk within a large vessel, with two inches under the bottom, and one inch of space at the sides, into which space water may be put to cool the milk, and into which steam may be let to warm the milk and scald the curd. The more water surrounding the milk, the more uniform will be the heat. The cream, if added, (which is generally done,) is best incorporated with the milk, by putting it with twice its quantity of new warm milk from the cow, and add warm water to raise its temperature to ninety-eight degrees. Stir it till perfectly limpid, add cream to milk, and then put in rennet, that the same stirring may mix both at once with the same mass. If milk is curdled below eighty-four degrees, the cream is more liable to work off with the whey. *An extreme of heat will have a like effect.*

Curdling heat is varied with temperature of the air, or the liability of the milk to cool after adding rennet. A fine cloth spread over the tub while the milk is curdling will prevent the surface from being cooled by circulation of air. No *jarring of the milk*, by walking upon a springy floor or otherwise, should be allowed while milk is curdling, as it prevents a *perfect coherence.*

Rennet.—Various opinions exist as to the best mode of saving rennet, and that is generally adopted which is supposed will curdle the most milk. I have no objection to any mode that will preserve its strength and flavor, so that it may be *smelt* and *tasted* with good relish, *when put into the milk*. Any composition not thus kept, I deem unfit for use, as the coagulator is an essential agent in cheesing the curd, and sure to impart its own flavor. The rennet never should be taken from the calf till the excrement shows the animal to be in perfect health. The stomach should be emptied of its contents, salted and dried, without scraping or rinsing, and kept dry for one year, when it will be fit for use. It should not be allowed to gather dampness, or its strength will evaporate. To prepare it for use: into ten gallons of water, (blood warm,) put ten rennets, churn or rub them often for 24 hours, then rub and press them to get the strength, stretch, salt and dry them as before. They will gain strength for a second use, and may be used when the weather will admit of soaking them to get the full strength. Make the liquor as salt as can be made, strain and settle it, separate it from sediment, (if any,) and it is fit for use. Six lemons, two ounces of cloves, two ounces of cinnamon, and two ounces of common sage are sometimes added to the liquor to preserve its flavor and quicken its action. If kept cool in a stone jar, it will keep sweet any length of time desired, and a uniform strength can be secured while it lasts. Stir it before dipping off to set milk, take of it enough to curdle milk *firm* in 40 minutes. Squeeze or rub through a rag, anatto enough to make the curd a cream color, and stir it in with the rennet. When milk is curdled so as to appear like a solid, it is divided into small particles, to aid the separation of the whey from the curd. This is often *too speedily done*, to facilitate the work, but at a *sacrifice of quality* and *quantity*.

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[*] We have in previous volumes described the modes of making various kinds of cheese. A former essay of Mr. Fish's is given in vol. X, pp. 114, 129, 147. We would also refer to vol. I, new series, p. 133, and for the mode of making the English Gloucester cheese, to the same volume, p. 165. An article on "Cheese Dairies of Connecticut" is given in volume II, p. 263; and a description of the mode of making the English Cheshire cheese in volume III, p. 268.

The three *indispensable agents, heat, rennet and pressure*, rightly applied, must keep pace with each other in effect. The two former operating to subdivide, the latter to aid cohesion, by bringing the particles of a sameness closer in contact. This should be *skilfully* and *studiously* applied in a mild way, according to the capacity of the curd to receive it. The less friction in working the curd the less waste. If *heat is raised too fast*, or commenced while the curd is too young, the effect of the rennet will be checked, and decomposition will not be complete, and will result in a leaky cheese. This often happens when steamers are used in small dairies. Heat may be raised in scalding *to keep pace with rennet;* if rennet is quick, heat may be raised quick; if slow, heat must be raised slow and held longer. Scalding heat may be carried from ninety-six to one hundred and four degrees, according to the size of the cheese, and temperature to which the cheese is exposed. During the process of scalding, the whey and curd should be kept in motion, to prevent the curd from settling and sticking together, as separating it is attended with great labor and waste from friction.

When the curd is cooked, so that it feels elastic and will squeak when chewed with the front teeth, it is separated from the whey to receive salt. This is done by dipping it into a strainer over a basket or sink, or drained off and salted in the tub. Either may be done without adhering in lumps, by stirring it in a small portion of whey, till cooled to 94 degrees. This is the most critical part of the process, where cheese-makers are most likely to err, as the portion of salt retained in cheese after pressing, will be in proportion to the capacity of curd to receive it when added. At a particular period and temper of curd, when draining off whey, it will absorb salt freely, and after being thoroughly mixed and packed up for a few minutes while warm, it will be evenly shrunk and cleansed by salt and whey, and will press out freely; but if the curd is *not well cooked*, or if it is cooled too fast in draining off whey, it will acquire a degree of stubborness, prevent the absorption of salt to shrink and cleanse, and *no amount of pressure* will be sufficient to drive out the fluid.

If curd is not worked even, the larger lumps will not be cooked enough, or the lesser too much, (like large loaves of bread and small biscuit baked together in one oven,) hence, the cheese is left impregnated with the elements of fermentation, which increase on being exposed to heat, till the cheese is sufficiently swollen, or huffed, for each constituent to occupy a separate space in the same shell or rind. The fluids are first attracted together by affinity, forming small cavities in which they remain *unaffected by salt*, become fetid, and generate an unpleasant odor, which is a fair proof of the quality of rennet used. Curd should be salted warm, as it is then more absorbent, and it should be thoroughly cooled before putting it to press, to suppress the combined action of *heat and rennet*. The quantity of salt required, varies with the condition of the curd, size of cheese, amount of heat to which the cheese is exposed in curing, and market for which it is designed.

A well worked cheese, from fifty to one hundred pounds, requires one pound of refined salt to forty pounds of curd, to remain in the cheese after it is pressed and exposed to a temperature of from seventy to eighty degrees. This may be varied from two to four pounds to the hundred, according to the texture of cheese required—small cheese requiring less, and large cheese more.

A degree of moisture is necessary in cheese for a malleable texture, but this should not be from *animal fluids retained in the curd*. A high salted cheese immediately exposed to high temperature, becomes sour, hard, dry and crumbling; the same exposed to a cool, damp atmosphere retains sufficient moisture to be soft, yet solid. A cheese light salted in a high temperature will cure quick, become porous, huffy and stale. *Curd from hay milk*, requires much less salt, than that from grass or grain feed, as it is poorer and will retain salt like lean meats. The richer the milk, the more salt is required to control the animal properties, and the *less absorbent the curd*, the pores being filled with the finer buttery particles.

More salt is required in hot weather also, to overrule the *combined action of rennet* and heat, *neither of which will be effective alone*. When curd is ready to press, it is important *to dispossess those decomposing agents*. The gastric juice (or coagulator) is a *fluid*, and works off with the animal fluids in whey; and the only way to get rid of it, is to work the curd down *fine and solid and work the whey all out*. Then cool the curd thoroughly before pressing, and the cheese will be solid and keep its place. But if the whey is not all out, the decomposer is yet on hand, continues its action (aided by heat) till *an equilibrium of chemical action is destroyed in the cheese*, and the fluid properties leak out in fetid whey and oil, leaving it a rank and worthless article. *In short*, the proper method of using salt must be arrived at by a close observation as to its *chemical combination* with the *constituent properties* at different ages of the cheese with different sizes, heat, dampness, &c. This, although an essential point, has not been sufficiently determined by chemical analysis to be reliable. (*To be Continued.*)

The Carol of May.

[The following song, the production of an English writer, was left with us by a friend for republication, sometime since. It seems appropriate to the present season:]

By the side of a mountain o'ershadowed with trees,
With the clusters of vines intermingled and wove,
I behold my farm-cottage, dear mansion of ease—
The seat of retirement, of friendship and love.
In the morn, when I lift up the latch of my door,
My heart beats with rapture to hear the birds sing;
And at night, when the dance in the village is o'er,
On my pillow I strew the fresh roses of spring.

Then I hie to the forest, from noon's scorching beams,
Where the torrent's deep murmur re-echoing sounds;
The herds quit their pastures to quaff the clear streams,
And the flocks of the vale lie extended around.
I muse, and my thoughts are contented and free,
I regret not the splendor of riches or pride;
The seat of retirement is dearer to me
Than the proudest appendage to greatness allied.

I sing, and my song is the carol of May;
While my cheeks glow with health like the wild rose in bloom—
I dance, yet forget not, tho' blithesome and gay,
That I measure the footsteps which lead to the tomb.
Contented to live, yet not fearful to die,
With a conscience unspotted I pass through life's scene;
On the wings of delight every moment shall fly,
And the end of my days be resigned and serene.

THE FARMER'S NOTE BOOK.

Culture of Carrots and Corn for Fodder, &c.

About the time I commenced doing a little business for myself in the way of farming, in the early part of 1846, a friend of mine solicited me to take the Cultivator. Not having a ready command of that harsh little word *no*, I consented as a matter of courtesy to take it for *one* year, as the expense was not very great. At the end of the year I was not quite ready to spare the Cultivator, and concluded to take it one year more; and at the close of 1847, I concluded to subscribe for the next volume, and prevailed on two or three of my neighbors to "do likewise." Is it asked what I have found in its pages to repay the trouble of perusing and the cost of paying for it? I reply, that I think I have obtained *general* information relative to the business of farming sufficient to compensate me *amply*.

At page 217, vol. III, I found a description of a cheap and useful root cellar, from which I have received hints worth more than the price of two years subscription. I of course varied the plan to suit circumstances. Mine was under a hay barn, 16 ft. by 26. Under one half the building the sheep have a shelter, and under the other half, 16 by 13, the cellar is located. Of course it is not quite as large as that of our Vernon friend, but otherwise it is similar to his. The passage is through the sheep shelter. It may be well to remark that the barn stands on descending ground, and the sheep occupy the lower end, and the cellar is at the upper end.

Carrots are the roots I keep in the cellar, and I will just mention my mode of cutting them:—I made a box by taking a piece of plank, say one foot wide, and two and a half feet long, nailing pieces of boards one foot wide to the sides and ends. A strip of leather nailed at each end, to the sides of the box, forms a handle. This box is filled with carrots, and by the aid of a common spade, ground sharp, they are soon "chopped up," when they are placed in the sheep-troughs and soon devoured. For feeding hay I use racks, made by nailing boards to upright pieces of scantling, similar to those described by L. A. Morrell.

When I commenced reading the Cultivator, I found the raising of carrots and corn fodder recommended. Not being much acquainted with the business, I tried a little piece of each in the garden by way of experiment. A neighbor when he saw me weeding the carrots, (little things scarce large enough to be seen,) told me it looked like "little business," and that for his part he had rather hoe potatoes than trouble himself with such small affairs. However, when autumn came and he compared his diseased potatoes with my sound and rich looking carrots, he seemed to change his opinions. He told me last spring, that he had a piece of ground, about fifty square rods, in a tolerable state of fertility, and better adapted than mine for growing carrots on account of being free from stones; and that if I would furnish seed for the whole, I might have the use of half of it. I accepted the offer, and the seed was procured and planted. A simple barrow or wheel was used for marking the ground. The seed was then scattered along in the furrows by hand, at the rate of perhaps two and a half pounds per acre. Distance of drills apart twelve to fifteen inches. The seed was covered by reversing a hoe, and shoving it over the drills. The ground was around the barn, and it did not fail of producing plenty of weeds; but by beginning in time, and persevering, they were kept down till the carrots got above them and choked them down. In our mode of planting, I think two active men might plant half an acre in a day. At harvest a scythe was first passed over them, cutting the tops as close to the ground as could conveniently be done. With a hoe ground sharp, the tops were then cut off, one row at a time, and the tops were raked off out of the way. The carrots were then thrown out, row by row, with a spade. Whether our mode was the *best*, or even a good one, I am not prepared to say, not being practically acquainted with any other. The yield, though not great, was satisfactory. The quantity obtained was about 270 bushels, measured as potatoes; I presume they would not hold out by weight. The amount of time spent in plowing and harrowing the ground, and in sowing, weeding, and harvesting, may be set down at twenty-five days. Allowing seventy-five cents per day for labor, and calling the cost of seed and use of land $3.25, the amount is $22, which brings the carrots at a little more than eight cents per bushel, and I deem them worth at least as much as potatoes for horses, cattle, or sheep.

A word as to corn fodder. My garden experiment did very well, and I concluded to "try again." I planted in drills this year, about three quarters of an acre. The growth was tolerable. I endeavored to adhere to the directions given in the Cultivator for curing it, but the weather in autumn was so extremely wet, that I could not get it as dry as I wished. I got it in as good condition as I knew how to, and put it in the barn, but it moulded so much as to lose most of its worth. I would like to hear whether others have met with similar difficulty, or whether my failure was owing to bad management.

In asking my brother farmers to subscribe for the Cultivator, I discover something of an idea prevailing that it concerns chiefly the patricians, and that plebeians can derive little benefit from it. But as to the idea that the contents of the Cultivator are useful only to large farmers, I deem it widely erroneous. In its pages every man engaged in agriculture, whether he cultivates ten or ten thousand acres, may, in my view, find information worth much more than one dollar per annum. SAM'L WILBUR. *North Easton, N.Y.*, 1848.

Large Crop of Indian Corn.

I send you a statement of my success in cultivating corn the past season. As I am indebted to the Cultivator for success, I thought I might be the means of benefitting others through the same channel.

STATEMENT OF CULTURE—The field on which I grew 172 bushels of corn to the acre, and two 2-horse loads of pumpkins, was on a clover and timothy sod of three years standing, and on white-oak upland—part of a farm that was considered run down. In the fall and winter of 1846, I fattened on it about 30 head of hogs, by scattering the corn on the worst parts of the same. About the month of March last, I gave it a moderate dressing of barn yard manure. The field was plowed six or eight inches deep, so that in parts hard yellow clay was turned up full 2 inches deep. The corn was planted in rows four feet apart, averaging about one foot distant in the row. When first the corn came up, it had an unfavorable appearance, in consequence of the large spaces of hard clay; it looked very yellow in patches, but by degrees, these patches disappeared, and as soon as the roots had penetrated below the clay, and reached the sod, it showed quite a healthy color, and made a rapid growth. I was careful during the whole of the cultivation, to disturb as little as possible, the sod, in consequence of some remarks I had read in the "Albany Cultivator," from the pen of the late lamented Judge Buel, to which publication I am indebted in a great measure for my success. A. A. Mullett.

EXPENSE OF CULTIVATING TEN ACRES.

Manure and hauling,	$20 00
April 11, 7 days plowing at $1.50 per day,	10 50
" 2 days harrowing at $1.50 per day,	3.00
" 30th to May 4, Striking out,	1.25
Man 5 days planting at 50c.,	2 50
Boys dropping,	1.25
Three bushels corn at 40c.,	1.20
May 15, Replanting, &c.,	1.00
Plowing some 4 times, 3 days each $1,	12 00
Boys harvesting same,	9.00
Cost of cultivating ten acres,	$61.70

or $6.17 per acre, exclusive of rent.

P. S. I cut the whole of the corn, and the fodder has been sufficient to save from 8 to 10 acres of hay, my usual consumption.

Muck Compost.

Will you have the kindness to give us your views as to the comparative value of compost, composed of equal parts of rich swamp muck and yard manure, with decomposed yard manure, when applied as a top-dressing to light upland soil; and also the value of the same compost compared with green manure for the same purpose?

What do you think would be the value of a compost made with equal parts of rich mould, the washings of higher lands, and yard manure, compared with decomposed and green manure as in the foregoing, when applied as a top-dressing to a black, lowland soil?

What would be the comparative value of a compost composed of equal parts of good sandy loam and yard manure, when applied as a top-dressing to a clay soil?

Should not the earthy part of a compost be of a character opposite to the soil on which it is to be applied?

Do you consider that compost, when applied to the land, is more valuable than would be the parts that compose it when applied separately; and if so, what are the changes that render it more valuable?

What would be your opinion as to the comparative value of the different kinds of compost, when applied to tillage lands of the above description?

Woodstock, Vt., 1848. A Subscriber.

We cannot give a precise answer to the above questions. "Swamp muck" varies greatly in quality, and that which some people would call "rich," might not be of the very best quality. Animal manures also vary in value. Stall-fed animals, or those which eat the richest food, produce the strongest manure; and one load of this manure, abounding in ammonia, would probably go as far in decomposing peat and rendering it soluble, as two loads of manure from stock fed only on straw or poor fodder of any kind. Various persons have used muck compost; but perhaps the most accurate experiments with muck compounded with animal manure, were made by Lord Meadowbank, forty years ago. According to his trials, a compost made of one part stable manure with two parts of peat, fermented, and thoroughly incorporated together, produced effects on several different kinds of crops, and on various soils, equal to the same quantity of unmixed manure,—whether the latter was applied in a fresh or decomposed state. But we presume the peat in the case referred to was of the best character.

In *general* we should think "rich mould" which had been washed from "higher lands," would be more valuable than "swamp muck."

We *do* think "that [peat or muck] compost, when applied to land is more valuable than would be the parts of that compost when applied separately." The vegetable food contained in peat, in its natural state, is locked up by noxious acids, which are neutralized by the alkalies of animal manures. Thus Dr. Dana observes: "the solubility of geine is wonderfully increased by the action of alkalies."

But we would suggest to our correspondent the advantage of testing these questions by *accurate experiments* of his own; and when these have been made we should be pleased to learn the results.—Eds.

New Mode of Setting Posts.

The first, and one of the most important subjects to be considered in the commencement of farming, is that of fences, and as there is no other business that requires more wisdom and economy to ensure success, it is necessary first to determine on good fences in all cases, and then to consider how they may be made good at the least possible expense. As the post and board fence is adapted to more situations and circumstances probably than any other, and as the manner of constructing it is somewhat varied and expensive under any and all circumstances, it may be well to suggest here a new and cheap mode of setting posts, which is the most expensive part in the labor of constructing a good and cheap board fence.

A small pile driver may be constructed so as to fit the bolsters of a common wagon, with the hammer to work immediately behind the hind axle tree; the hammer should weigh about two hundred pounds, to be able to drive large posts with facility, without being too heavy for one horse to draw up without a purchase; the frame work may be so constructed as not to be unwieldy, or much more inconvenient to shift on or off of a wagon than a common hay or wood rack. When in use, the wagon containing the machine must be placed on a line with the fence, with the hammer directly over where the post is to stand, the wheels firmly blocked, and the horses detached. The post, having been sharpened, is raised to its place by the hammer rope, in the same manner as heavy piles are raised, when a few drops of the hammer set it firmer than could be done by digging a hole for the purpose, and with less than half the expense of labor. The horse is then attached to the wagon which is drawn to where the next post is to stand, and the same process repeated. This method may be adopted on all level land with the best success; it is a perfectly simple operation, and so cheap that it only requires an introduction to get it into use in a very short time.

Pile-driving, heretofore, has been very correctly considered a heavy and expensive business; but when we consider the difference between the expense of building and working a machine to drive large piles, thirty or forty feet deep, and another to drive small ones, two or three feet, it will be readily seen that fence posts may be driven, in the manner described above, much cheaper and better than they can be set in any other way. When the posts are set, the boards should be nailed on the middle post with one nail in each, and allowed to lap at the ends from four to six inches. A narrow board should be put up and down the posts to cover the ends of the boards, and pins made of cedar or some durable timber, put through into the posts, passing under the boards to prevent any bad effects from the expansion and contraction of the boards in wet and dry weather, which, though very small in one length, amounts to enough to do much mischief, in loosening posts and breaking nails, in a long stretch of strait fence. The posts should be sawed off at the top, with an inclination downwards from the face, and a short sound piece of board nailed on to carry off the rain. This is the cheapest *good* board fence that can be made, and should you consider it of consequence, I will give you a plan and estimate of the expense of a machine, and the building of such a fence. Dean. *Lyonsdale.*

The largest Corn-Grower in America.

A writer in the Morgan County (O.) Chronicle, states that he travelled, last season, in company with William Polk, Esq., a brother of our President. He was informed by Mr. P. that his crop of corn for 1846, grown on his plantation in Arkansas, was estimated at 100,000 bushels, and that he supposed he was the largest grower of this article in the United States. The writer presumes that he is the largest grower of this grain in the world. His cotton crop was said to have been a failure—he having picked "only between four and five hundred bales." He kept 200 hogs on his plantation. He was selling corn in New Orleans from 60 to 110 cents per bushel. The follow is an estimate of his products:

His corn was then worth at least			$70,000
His Cotton	do	do	16,000
His Pork	do	do	4,000
Making the aggregate of			$90,000

for three articles *only* of his products. His whole produce is supposed to be worth at least $100,000 per year. It is stated that Mr. Polk began poor, and had made all he possessed by his own exertions; and in conclusion it is added:—"Here, then, are two planter's sons beginning the world poor; one is the greatest corn grower in the world—the other holds the first office in the world."

"Gutta Percha."

This is a substance which has been brought into notice within a few years. It is the product of a tree which grows in the East Indies. Prof. Webster, of Cambridge, Mass., has given in the Boston Courier a more particular account of the article and its uses than we have before seen. He has made several experiments with this curious substance, and has prepared from it a variety of articles. At and below a temperature of fifty degrees, it remains as hard as wood. At a temperature a little below boiling heat, it becomes soft, and is then easily cut and moulded into all varieties of form. When it again becomes cold, it resumes its former hardness. It is very tough, and in its ordinary state resembles horn. Prof. W. took a ring made from a slip half an inch wide and one-tenth of an inch in thickness, and found it would support a weight of one hundred and fifty pounds without breaking. It is found to resist the action of water, acids and many chemical agents. It has been used for tubes for the conveyance of gases, for cementing substances; and Prof. W. has had a pair of shoes made from leather prepared in a solution of the substance, and put together without sewing, pegs, or nails; and they are pronounced by the maker stronger than he could make them by the usual method.

In the experiments which have been made for testing the action of water upon the "Gutta Percha," the water has received no impregnation, has acquired neither taste nor smell, nor has the material been in any way changed, and the tubes have not been ruptured by the freezing of the water in them. All circumstances have induced Prof. W. to believe that it would be preferable to any other article for the purpose of making pipes for the conveyance of water. As yet but a small supply only of the material has been obtained; but it can be had in abundance in the country where it is produced. It is procured by felling the trees from which it is obtained—stripping off the bark, when the substance exudes in the form of a milky juice, which is collected and poured into troughs, where by exposure to the air it hardens. Prof. W. has adopted a mode of dissolving the substance without the aid of heat, which he thinks of advantage. The particulars of his process are not given.

Carrots as Food for Stock.

At one of the agricultural meetings held in Boston during the past winter, the subject of cultivating "root crops" for stock, was discussed. The general expression was, that the carrot is the best root for this purpose, in situations adapted to its growth. Hon. Mr. Brooks stated that he had made experiments in feeding carrots, and for young stock he thought them as valuable in weight as good hay. He thought they did not produce as much milk, when fed to cows, as potatoes, and hogs preferred potatoes. He considered carrots compared with oats, to be worth 33 cents per bushel when oats were worth 50 cents—that 10¼ lbs. of carrots were equivalent to 3 1-2 lbs. of oats. He considered the tops of carrots of sufficient value to pay the expense of harvesting. He put them up in small stacks out of doors, and they kept good till mid-winter.

Mr. Rice said he sowed carrots early in May on light land—usual crop 500 bushels per acre—40 bushels weigh about a ton, and were worth as much as half a ton of hay.

Mr. Proctor said 35 tons of carrots had been grown on an acre at a single crop, and it was not uncommon to obtain 32 tons. Most of the speakers mentioned that the blight had injured their carrots, more or less, of late years.

Plowing Well.

No farmer, we think, who has ever remarked the inefficiency of the "cut and cover" mode of plowing,—that is, trying to throw over a slice of earth twice as wide as the plow will perform,—will prefer it to the infinitely superior mode of drawing deep, straight, and narrow furrows. "It is not to please the eye only," says a late practical writer, "that the plowmen of Westmoreland, Cumberland, and other well cultivated counties in England, take so much pains in drawing their deep furrows, as straight as a line can make them, and laying them so compact, that not a crevice between them can be found in fields of many acres, but to favor a perfectly even and uniform covering of the seed sown upon the ground." We would recommend to the farmer who reads this, to plow the next acre with perfectly straight furrows only six inches wide; and if, after viewing its superiority, he then goes back to foot-wide slices, we shall be very much mistaken.

Moon Farming.

A correspondent of the Prairie Farmer, furnishes an article of considerable length, in quite a scientific dress, to show the influence of the moon on vegetation, and as a consequence, the importance of sowing seeds at the right time of the moon. Believing industry, energy and good cultivation to be the main causes of success, and not losing the best days of the season in waiting for the right time of the moon, we shall attempt to show the false reasoning of this writer.

He commences by speaking of the effects of light on vegetation—function of the leaves—importance of light—decomposition of carbonic acid—oxygen and carbon—assimilation of carbon—reflection of green rays—mysteries of nature—respiration—agricultural science, &c., and concludes that as light is important to the growth of plants, it is very proper that they should commence vegetation at a time when they can receive all the light possible; that is, in addition to sunlight during the day, they should have the benefit of moonlight during the night. Now it has been demonstrated that the light received from the sun, exceeds that received from the moon, as more than a *hundred thousand* to *one*. If, therefore, a farmer can find out just how much his young crop will grow in one day of sunlight, he will know about how much it will grow in a hundred thousand days of moonlight, or about three hundred years, supposing his crop to gow by moonlight every night the year round. And if a hundred days of sunlight are required to perfect his crop, then it would require only about thirty thousand years of moonlight before his crop would be fit for harvesting. Whether this would overbalance the loss of a week or two of fine weather in spring while waiting for the right time of the moon, we must leave the candid and intelligent farmer to decide. A friend at our elbow suggests that Adam's crop of cabbages could not have advanced very far towards maturity up to this present time.

Implement for marking Rows—Guano.

I am inclined to offer a notice of a simple contrivance of my own, which I have had in practice for three years, and have found my crops much improved by it. As a planting implement, I consider it an improvement on the old method of furrowing the rows with a plow, which is apt to place the seed too deep in the soil. Instead of a plow, I use a small wedge-shaped harrow, only fourteen inches wide behind, with seven long heavy teeth, but long in proportion. This pioneer harrow cuts deep, and puts the plowed ground in fine tilth to receive the seed, and makes mellow covering for the hoe.

For the last three years I have used the Peruvian Guano, composted with sandy loam, as a top dressing for grass lands—500 lbs. guano to the acre—and have obtained very good results. For corn and potatoes and all planted crops, I run the rows with the pioneer harrow; spread the guano along the rows—then run the harrow again, to incorporate the guano finely with the soil. The germination is accelerated, and the plant has every inducement to a vigorous growth. The after culture is followed closely with the cultivator and the hoe: the results highly encouraging. I obtained last year 62 bushels yellow corn, *shelled*, per acre, from old moss-grown pasture lands, with 500 lbs. Peruvian Guano alone, per acre—the year before 70 bushels corn per acre from the same kind of land; but a moderate dressing of course manure was plowed in in the fall, and then 500 lbs. guano composted, and applied as above at planting time. Jona. Bowers. *Seekonk, Mass., March* 1, 1848.

Account Current with a Cow.

I am no farmer, but I feel much interest in the cause of agriculture. I have often remarked the very inferior stock, particularly cows, of which most farmers in this State keep from eight to ten. I have often asked why they did not keep better cows, and the reply generally has been, "cows are high, and afford no profit." I have always thought differently, and last summer made up my mind to purchase a cow. A friend in the town of Warwick recommended one, ten or twelve years old, called a "native," and I bought her. I have kept a regular and correct account of debt and credit with her, a copy of which I herewith enclose you. I know of no stronger argument that can be used against the idea of the unprofitableness of cows, which I have so often heard advanced in this vicinity, than these statements of *facts*—no *guess-work* about them.

The cow had rather poor pasture. I hired a lot of about two acres, that was sown the year before to millet, *without any grass seed*. But my cow did not arrive as soon as I expected, and the grass and weeds got up considerably. I sold what could be mowed off for $12. The man who bought it thought there was about a ton and a half when he got it into the barn. Most of the cows in our city run upon the commons, and I am sure the feed there was as good if not better than mine had. I should have let her run out; but she showed a disposition to go back where I bought her, about ten miles from the city. You see I have bred two calves. The cow had twins—males—which I sold when they were a week old for $5.

Cow, (Old Warwick)	Dr	Cow, (Old Warwick,)	Cr.
1847.		1847.	
July 29, Cash for self...	$38.00	July 16, By cash for grass off lot,............	$12 00
" 1 bushel meal,.	1.00	31, 2 calves, (twins)..	5.00
" Paid for pasture,	10 00	Dec. 31, Milk sold at store of C. & G., from Aug. 2 to date,..	62.17
Aug. 20, Oil Cake,.....	4 69	Cash for milk sold sundry persons within above time	8.86
21, Hay,.........	10.73	Used in my family 2 quarts per day from Aug. 2 to Oct. 1, 118 qts. at 4c.,..............	4.72
24, 4 bush. shorts,	92	Do. from Oct. 1 to date, 184 qts. at 5c.	9.20
" 1 " meal,	88	Hay, meal, &c. on hand,..........	6.00
Oct. 5, 100 lbs. oil cake,	1.05	Present value of cow,............	38.00
Nov. 15, 1 bushel meal,	90		
Dec. 6, Meal and Feed,	9 59		
17, 100 lbs. oil cake,	1.70		
23, Brl. meal, Corn and Cob........	1.15		
31, Bal. to new ac't	63.74		
	$144.95		$144.95
		Jan. 1, By Balance, $63.74.	

Should you wish to have a copy of the account at the end of this year, I will send it. I am pretty confident, however, that the credit for the cow will be increased from the above balance. Henry R. Congdon.

Providence, R. I., Jan., 1848.

We shall be glad to receive Mr. Congdon's account with the cow for the present year.—Eds.

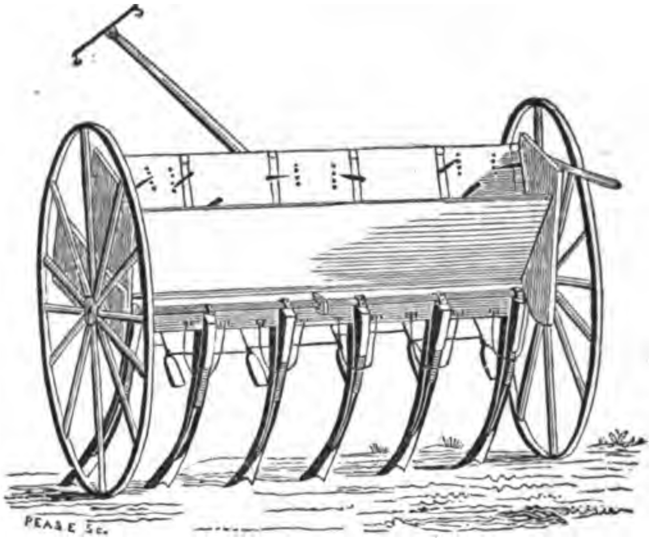
Experiment in the Culture of Corn.

I will venture to give a brief statement of an accidental experiment in the culture of corn. In 1846, I procured some seed-corn of a large twelve-rowed variety, intending to plant it in the same field with an eight-rowed variety, but to keep them separate and thereby to test the relative value of the two varieties; but by accident, after being shelled, the corn got mixed, and was planted in that way. When harvested many of the stalks (one-half I should think) produced two good ears of the usual length. One fact particularly attracted my notice, and which showed the mixture of the two varieties on the same stalk. Many of the stalks which produced two ears had one of eight and one of twelve rows; others two of ten rows; others still, two of eight rows. Thinking that by carefully saving seed from such stalks as had two ears might tend to establish a variety possessing that valuable characteristic, I did so that year, and planted the next year, 1847, entirely from such seed; but my crop that year greatly disappointed my expectations in that respect. Still I think it worth a thorough trial. I would suggest to your readers that several of them make the same experiment this year by mixing two varieties, say eight and twelve-rowed, and plant them together in that way, and communicate the result through the Cultivator after next harvest. An Old Subscriber. *Caanan, Ct., March*, 1848.

Smith's Patent Lever Drill.

The annexed is a cut of a seed drill for wheat and other grains, invented by H. W. Smith, of Pennsylvania. Arrangements have been made for manufacturing the machine at Syracuse, by C. Masten, of Penn Yan, N. Y., who owns the patent for this state. It is described as follows:

"The axles are of cast iron, extending half the width of the machine, with a flange some six inches in diameter on the end, which, with a cast iron plate of the same dimensions screwed on the wheels, retains the spokes and forms the hub. These wheels and axles may



Smith's Patent Lever Drill—Fig. 44.

be adapted to carriages, wagons, &c. On the axles are cast also the cylinders, three on each, in which indentations or holes are drilled to carry the grain through valves out of the hopper, a box extending the width of the machine into tubes, through which it is deposited in the furrow. It has a lever by which all the teeth can be lifted out of the ground for the purpose of turning in the field, or passing over a rock, or packing to remove to and from the field by a single operation, and two others to close the valves and shut off the feed at the same time. It has a graduated index, by which it can be set to pass any given quantity of seed per acre, or altered from one quantity to another in a few seconds. The teeth are long to prevent cloging, and can be easily cleared by the operator in case they should gather grass, &c. They are bent something like cultivator teeth, and are made to cut a furrow three inches wide at the bottom, where the seed is deposited at any required depth through the tubes which are fastened to the back of the teeth, six in number, and the furrows are cut nine inches from centre to centre; the depth can be adjusted by a regulator, in which the end of the pole is inserted. After the seed is deposited, the earth falls back and covers it. With this machine, a boy and pair of horses, ten acres per day are readily planted, and five pecks of seed are equivalent to two bushels per acre sowed broadcast; with the drill machine the seed is distributed evenly, and is buried at a uniform depth, and every sound seed vegetates.

Management of Manures.

As economy in the accumulation and application of manures is a subject of almost paramount importance to the farmer, permit me to offer a few thoughts, as it is by an interchange of views that the farming interest is most likely to be promoted. In the first place, the dimensions of the barnyard should be adapted to the amount of stock to be wintered. The barn being sufficiently capacious, I would advise that all the products of the farm be housed. The farmer can then consult his interest, either to thresh his grain in the fall or winter; but supposing a part at least to be threshed in the fall, the overplus of straw, after littering the yard to the depth of a few feet, should be nicely stacked. This littering lays the foundation for the absorption of all liquids consequent upon the yarding of stock. As the winter advances recourse should be had, as occasion requires, to the straw stack, that a clean bedding may be provided for the stock; and then if suitable sheds are connected with the barn, sufficient protection is afforded during the inclemency of winter. The advantage arising from this mode is, all is saved, and this mixing up of straw with the manure of animals, makes an excellent compost for hoed crops the ensuing spring.

Now to its application. I very much doubt the propriety, on the score of economy, of some who heap up the manure in the yard to rot, or of others who draw and stack it in the fields for the same purpose, and are subjected to the additional expense of shoveling and carting it twice; it also having been ascertained that a good share of its fertilizing properties escapes during fermentation. My plan is to let it remain until just previous to plowing my ground for corn, which, by the by, I do not do until about the time for planting, and then haul, and spread and plow it under—plant my corn. and by time the corn is up the manure passes through the stage of fermentation, which greatly accelerates its growth. By adopting this method in the first place, you not only save all, but in the second place you have the full benefit of its fertilizing and enriching properties. And then by planting the early varieties, if in a wheat growing district, the corn can be taken off when the ground is in a fine condition to be sown to wheat. If otherwise, it will be in the best possible condition for any spring crop. W. Ansley.

Potter, Yates Co., March, 1848.

Book-Farming—Potato Disease—Large Pigs.

People may say as much against *Book-farming* as they please, yet I think it is a fact, (and I am not the only one that thinks so,) that the town of Cheshire is worth thousands of dollars more than it would have been if there had never been an agricultural paper taken and read by the inhabitants. Since the Agricultural Society of New Haven County was re-organized, some ten or twelve years since, Cheshire has taken more than double the premiums on farms of any other town in the county; it has taken the first premium on five different farms, the second and third on two or three others. And as for stock, dairy products, grain, vegetables, fruit, &c., there is not a town in the county that can go ahead of Cheshire. And why is it? I will tell you. All the principal farmers in the town read the Cultivator or some other agricultural paper. Why, there is one piece in the February number, I think worth more to each reader of the Cultivator in all New England than the volume costs—I mean the article entitled "unenclosed lands," by William Bacon. I wish the Legislature of Connecticut, at the next session, would pass a similar law to the one mentioned by Mr. Bacon. I have suffered serious inconvenience and loss by cattle straying at large over the highways, breaking into my fields and door yards.

Last season I planted four different kinds of potatoes, all in one field, applying to each hill a handful of a compost of ashes, lime and plaster, in equal quantities. The tops kept green till late in the fall, and the potatoes were large and fine when dug. The land was tilled, the potatoes were planted, hoed, dug, and housed in every way similarly to F. Holbrook's method as described in the January number of the Cultivator. My cellar is deep and dry, and so warm that there has been no frost in it this winter. The potatoes are still dry, yet they nearly all turn black. They have no stench more than any other potato; but nearly one half are a dried, black, worthless mass for man or beast.

I frequently see notices in the papers of the weight of hogs. On the 8th of January, 1844, I butchered two spring pigs, a sow and a barrow. They were just three hundred days old. The sow weighed 440 lbs., and the barrow 370 lbs., dressed. I bought them at five or six weeks old of my neighbor to try experiments on. They were fed with skim milk or whey, ground corn and rye, with a dessert of apples, after the latter were grown. And I can say that they neither went hungry or dry, wet or cold, except when I poured cold water on them in hot weather.

Cheshire, Feb. 21, 1848. CLAUDIUS ALLEN.

Rat-Proof Granary.

In your February number, it is mentioned that a gentleman at Baltimore, Md., wishes for a plan to build a rat-proof granary. In the first place, to hold the required quantity, it should be twenty feet wide and thirty feet long, with fourteen feet posts. The roof and ends should project over eighteen inches, as there should be a window at each end. The projection will prevent the rats from running up and gaining admittance at the windows. The sides should be covered with slats or planks, four inches wide, one and a half inches thick; leaving a space between three-eighths of an inch to allow circulation of air. The covering below the projection should be of southern hard or pitch pine. It may be selected full of pitch at almost any lumber yard, and the floor should be laid with the same kind of stuff, and by having the door boards and threshhold as full of pitch as possible, and the latch on the bottom as well as the centre of the door to keep it from warping, you are sure no rats can trouble you, as they cannot get through pine full of pitch, any sooner than cast-iron. It fills their teeth in the same manner it would a rasp. I have a granary covered with southern hard pine, and they have not attempted to get through the planks, although it has been covered nine years. THOMAS ANDREWS. *Smithfield, R. I., Feb.* 24, 1848.

Mr. JACOB TEN BROECK, of Greenport, N. Y., writes in relation to the above subject as follows: "I built a corn-house fourteen feet square, and raised it on short posts on the corners and centre, about two feet above ground; and tried for experiment old tin pans laid on the top of these short posts, upside down, and I have not found a rat to trouble me as yet, which is now about three years. My barn was completely overrun with rats, and I gave them one dose of Punderson & Harris' 'Rat Exterminator,' bought of druggists in Hudson, and they have left me."

Best Fowls.

I have quite a flock of fowls of different varieties, and am inclined to think the common dunghill as good as any breed for *layers;* but for the table I prefer larger varieties. My fowls have given me eggs almost every day this month, (December.) They require for food, meat as well as grain. They should also have access to lime, brick-dust and gravel. J. C. SWAN. *Calais, Maine.*

DRAINING.—To ascertain whether a subsoil can be benefitted by under-draining, remove the surface soil for a small extent, then dig a hole into the subsoil; if in this hole water soon collects, then the subsoil will be benefitted by draining.

Domestic Economy, Recipes, &c.

Wash for Buildings.

In one of the numbers of the Cultivator for 1847, a subscriber asks—" Will coal-tar, put on a roof, prevent the sparks from a locomotive from catching?" [Vol. 4, page 227.]

The following receipe was sent us by a gentleman of New Orleans, who writes that the wash was satisfactorily tested upon the roof of the Phœnix Foundry in that neighborhood. It is not only a protection against fire, but renders brick-work impervious to water. The basis is lime, which must first be slacked with hot water in a tub to keep in the steam. It should then be passed, while in a semi-fluid state, through a fine sieve. Take six quarts of the fine lime, and one quart of clean rock salt for each gallon of water—the salt to be dissolved by boiling, and the impurities to be skimmed off. To five gallons of this mixture, (salt and lime,) add one pound of alum, half a pound of copperas, three-fourths of a pound of potash, (the last to be added gradually,) four quarts of fine sand or hard wood ashes. Add coloring matter to suit the fancy.

It should be applied with a brush. It looks as well as paint, and is as lasting as slate. It stops small leaks, prevents moss from growing, and renders the work incombustible. B. *Philadelphia, Pa., Feb.* 1.

CHEAP PLASTER FOR COARSE FINISH.—Take one part clay, three parts of river sand, mix with a portion of the sand when wet, sufficient quantity of hair—thoroughly mix the whole mass until of a proper consistency, and use as lime mortar.

The above makes a good hard wall nearly or quite as serviceable as lime for inside finish. The above has been tried in this vicinity and endured for years.

Braceville, Trumbull Co., O. F. E. STOW.

KEEPING DRIED FRUITS.—In answer to the inquiry in a late number of the Cultivator, a correspondent at Fredonia, N. Y., writes—" Give the fruit a thorough steaming, after it is dried, so as to kill the nits of insects; then put them in some secure place where the flies cannot get to them."

PRESERVING EGGS.—Pack the eggs to be preserved in an upright earthern vessel, with their small end downwards, and pour over them melted tallow, while it is warm—(not hot.) The eggs should be completely covered, and when the tallow is cold, set the vessel in a cool place till the eggs are wanted. A writer in the *Ag. Gazette* states he has kept them nearly a year, and were found excellent.

RASPBERRY VINEGAR OR SYRUP.—Put one quart of best white-wine vinegar, to two quarts of raspberries, not over ripe. Let them steep in the vinegar twenty-four hours; then strain them through a sieve, without pressing the fruit, and pour the liquor so strained on two quarts more of raspberries. In twenty-four hours more, strain it off again, and to a pint of juice put one pound and a half of very fine loaf sugar. Put the above into a jar, and the jar into a pan of warm water, and let it stand till all the sugar is melted, taking off the scum as it rises; then take the jar from the warm water, and when cold, bottle off for use. These directions are given from a correspondent of the Gardener's Chronicle.

WHEEL-GREASE.—Two parts hog's lard by bulk, and one each of black-lead and wheat flour. We have heard wagons a mile off on a still morning, uttering the most dismal sounds, from the want of a little of this material, and which a very little imagination translated into the words—" meeze-e-ry, meeze-e-ry, meeze-er-y!"

Answers to Inquiries.

Waste Wool from Factories.—"A Subscriber," New Preston, Ct., Wool is similar to horn, in its composition—both containing a large proportion of nitrogen. They are, however, slow in decomposing, and give out their nitrogen in small quantities. Horn-shavings, from the comb-makers, have been found useful when applied to Indian corn at the time of planting, at the rate of a small handful to a hill. The sweepings of woollen factories are considered of great value in England, and also in this country, so far as the substance has been tried. We are unable to say what the usual course of managing it is, but we have seen it made up in compost-heaps with muck, and have been informed that after it had laid a year and was then thoroughly worked over, it was excellent as manure. It is best applied near the surface—a burying with a harrow being sufficient. Mr. Prentice, near this city, has used large quantities of hair, (the waste of a fur-factory,) in this way. Wool and hair, are of course, nearly the same in principle.

Whale-bone refuse.—G. W. B., New London, Ct. We should suppose the best mode of converting this substance into manure, would be to use it in compost, as above directed for wool-waste, &c.

Bee-hive.—T. W. Madison, Ind. We have heard Kelsey's bee-hive well spoken of, but have no personal knowledge of it.

Machine for working Butter.—J. H. C., Adrian, Mich. The only implement of this kind of which we have any knowledge, is that spoken of in the Cultivator, vol. I, new series p. 340, and figured in vol. III, p. 187, and still further described by J. W. Lincoln, Esq., vol. III, p. 240.

Wood for Firkins.—J. H. C. Oak, ash, maple, birch, and spruce, are all used in various districts, for firkins. There is not an entire agreement as to which kind is preferable. If the best of "second-growth" white oak, free from sap, can be had, it is probably as good, if not better than any. Old brash oak is porous, and not good for keeping butter a long time. The same may be said of open-grained ash, though the best of ash answers well. A butter-dealer of great experience, in this city, informs us that the best maple, either red, or sugar maple, thoroughly seasoned, makes as good firkins as he ever used.

"Pond Mud."—E. R., Hartwick, Otsego co., N. Y. The "deposite at the bottom of mill-ponds" is generally similar to what is called "muck," and which is found in various situations. The best manner of using as manure, would be to lay it up exposed to frost one winter, and then make it into compost, as has often been described for muck or peat.

Cherries for Market.—E. J. F.; Painesville, Ohio. Cherries to be sent far to market, must be picked before they are *dead* ripe—the stems left on. They will thus bear to be put in pretty large baskets, if they are not shaken or jammed on the way. They should be kept in as cool a situation as possible, and when they have reached their destination, should be divided into small parcels, to avoid the tendency to fermentation which exists in large masses.

Houses of Unburnt Brick.—J. A. L., South Hadley, Mass. So far as we have heard, walls of buildings made of unburnt brick, in the manner described in our March number for last year, (p. 74,) stand well—are not affected by frost, moisture or heat. They have been used more in Canada than elsewhere, and are highly approved. We are not in possession of any important information which we have not already published.

Rape Seed.—"A Subscriber."—Ypsilanti, Mich. We do not know of any rape seed for sale. It is not cultivated in this vicinity, and we are not apprized of its having been cultivated to any extent in this country.

Burnt Bones.—W. H., West-Bethel, Vt. In burning bones, the gelatine or animal matter, which is valuable as a manure, is consumed, but the earthy matter, which is chiefly phosphate of lime, remains, and is valuable as a manure for many plants, particularly wheat.

Clay Pipes.—We are informed that clay pipes for draining are made by W. K. Price, of Middletown Point, Monmouth county, New Jersey. The particular kind is not described, and our correspondent also omitted to state the price.

Packing Hay.—We have received several inquiries in regard to the best mode of packing hay in bales of 300 to 350 pounds, and the best machines used for that purpose. We shall feel obliged if some of our readers who are engaged in this business would furnish us with the information—stating the kind of machine or press preferred, where made, and the price.

Agricultural Societies.

Rensselaer County, N. Y.—Next Show and Fair to be held at Troy, 20th and 21st September. This is one of the most spirited county societies in the country. It has offered on this occasion about $1500 in premiums. The Secretary is Seth H. Terry, Esq., Troy, who will attend to all communications in regard to the society.

Windsor County, Vt.—Fair to be held at North Springfield, on the 4th and 5th days of October next.

Caledonia County, Vt.—Officers for 1848, James D. Bell, President; Wm. Gray, Bowman Bemis, Vice Presidents; Andrew McMillan, Treasurer; Geo. B. Chandler, Secretary. This Society paid premiums for the following crops grown in 1847: *Spring wheat*—thirty-five bushels on one acre, and thirty-one rods of ground,—first premium. A second premium was awarded for twenty-seven bushels on one acre. Both crops were of the Black Sea variety. One crop was sown the 20th of May and harvested last of August. *Indian Corn*—109 bushels per acre—planted 24th and 25th of May. A second premium for 200 bushels *of ears*, one acre. *Potatoes*—324 bushels "good sound potatoes" on one acre. A second premium for 303 bushels on one acre.

Ontario County, N. Y.—Fair to be held at Canandaigua 10th and 11th October next. The officers for the present year are John Greig, President; Elias Cost, Jos. Fellows, J. S. Hart, W. H. Lamport, Hiram Ashley, Vice Presidents; Oliver Phelps, Cor. Secretary; W. W. Gorham, Rec. Secretary; G. W. Bemis, Treasurer.

Seneca County, N. Y.—Officers for the present year, John Delafield, President; John D. Coe, Treasurer; William R. Schuyler, Secretary. John Kennedy, Delegate, to represent the Society at winter meetings of the State Society at Albany. Delegates have been chosen to attend the autumn fairs of the adjoining counties of Ontario, Yates, Tompkins, Cayuga, and Wayne.

Rhode Island State Society.—Officers for 1848—John Pitman, President; John Jencks, Christopher Rhodes, Wilkins Updike, Vice Presidents; Christopher S. Rhodes, Secretary; Henry W. Lathrop, Treasurer. The next fair of the Society is to be held at Pawtuxet.

Shingle Machine.—Those who are interested in the manufacture of shingles, are referred to the advertisement of Mr. Peters, in this number.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications received, since our last, from G. W. Brown, An old Subscriber, E. J. Ferris, J. H. Cleveland, Adrian Bergen, F. R., M. Quinby, T. D. Burrall, An old Housekeeper, E. Hammond, C. J., J. C. H. (with Reports on Manures and Culture of Indian Corn,) A Subscriber, W. H., S. A. Law, Wm. Bacon, J. S. Pettibone, J. F. Simonds, G. R. Nebinger, J. Hildreth, A. B. Price, Levi Bartlett, J. B. Burnett.

Our thanks are tendered to H. W. Washbon, for a cock and three hens of the Creole breed ——To Winter & Co., Nurserymen, Flushing, for copies of their new Descriptive Catalogue.——To Dr. J. H. Willard, for seeds of a very fine Cabbage.——To ———, for Hon. Mr. Marsh's Address before the Rutland county (Vt.) Agricultural Society.——To ———, for Mr. Buckingham's Report (in the Senate of Massachusetts) on the establishment of an Agricultural Institute, accompanied by a bill for that object.——To Major J. B. Dill, for Mr. Johnson's Address to the Cayuga Agricultural Society.——To Rev. C. E. Goodrich, Utica, for papers of the Melon and Melon Squash Seeds, described by him at page 159, of this paper.—— To W. H. Graham, publisher, New York, for Universal History, Part II.——To Hon. W. B. Calhoun, Secretary of the Commonwealth, for Transactions of the Agricultural Societies of Massachusetts for the year 1847.——To Hon. Salma Hale, for his Address before the Cheshire (N. H.) Agricultural Society, at its annual meeting in January last.——To ———, for first Report Montreal Horticultural Society.——To J. W. Bailey, for Proceedings of Clinton County N. Y. Ag. Society for 1847.——To Lea & Blanchard, publishers, Philadelphia, for parts 16, 17 and 18 of Domby & Son.——To F. Knight, publisher, for Washington's Agricultural Correspondence.

Singular variety of Squash.—We have received from Mr. Edwin Newby, of New-York, a few seeds of a variety of squash which is new to us. The seeds are about the size of those of the common crooked-necked winter squash, but are of a *dark-brown color*. Mr. N. gives the following description of the squash: "It is rather bell-shaped; weight 20 lbs.; skin very hard, and nearly pure white; flesh, a fair thickness, and almost black, as you may suppose from the color of the seeds. What adds most to its excellence is, it is the driest squash when boiled I have ever met with—it being similar to a mealy potato. From its extreme hardness I have no doubt that it is a good keeper. It was brought, by my express desire, from the Pacific ocean. I hope it will prove valuable in this country."

Schools for Orphans.—We have received a communication from Mr. James Jenkins, of Paintersville, Ohio, in regard to the establishment of schools for orphans. We have only room to state, in brief terms, his plan; which is the organization of one such school in each county, to be under the general supervision of the Agricultural Society of such county; "the scholars to labor a sufficient length of time for their support, and to defray the expenses of tuition, and spend the remainder of their time in study; and if any should enter too young to support themselves, let them be clothed by the agricultural society, or a charitable association, or an appropriation by the legislature. The course of study should be a good English course, with a thorough theoretical and practical knowledge of agriculture and horticulture. The scholars to remain in the school till eighteen or twenty years of age." We have no doubt that schools for the object named, if properly established and properly conducted, would be highly useful, especially for affording a good home, and the means of education for the poor orphan children of our towns and cities. The "Farm School" of Boston has rendered great service to this class of population; and the citizens of Boston and vicinity have now taken steps for the establishment of an institution on a larger scale, to be located in a favorable part of the country.

Pleasures and Benefits of Reading.—Mr. Adrian Bergen, of New-Utrecht, Long Island, observes in regard to the pleasures and advantages of reading—"It appears to me that to teach a man to *make money*, without giving him a knowledge of the proper manner of using it, is coming far short of the object for which our Maker has placed us here. Hence it is not the man who has the most worldly goods, but him that makes the best use of such goods, that most enjoys life. For myself, besides the pecuniary advantage of reading an agricultural paper, I derive a great *pleasure* in it. I find much satisfaction in looking over the back volumes of the Cultivator, (for I have them all,) and am not only interested with the *agricultural* part, but with those pieces which have an excellent *moral* tendency."

Old Clover Seed.—Mr. E. Croasdale writes—"In the last volume of the Cultivator, page 132, it is said, 'clover seed, kept over one summer, would be dear at half price.' My own experience and that of many others in our section, goes to prove the above assertion an error, and which might be attended with great loss. I have frequently known clover seed that had been kept over one summer, preferred before new seed, provided it had been properly kept."

Farmers' Clubs.—We are pleased to learn that a Farmers' Club has been formed in Seneca, Ontario county, N. Y. It was organized on the 15th of February last. We are informed that it has so far operated well, and that its members are steadily increasing. Mr. William M. Comb, of Geneva, is chairman of the corresponding committee.

Hussey's Reaping Machine.—J. Delafield, Esq., in the report of his farm, states that he uses Hussey's reaper for harvesting his grain. He cut 91 acres last year, and the cost is stated at 41 cents per acre, for reaping, binding, and shocking.

Sheep in Virginia.—Flocks of sheep appear to be on the increase in Virginia. We are pleased to see that several gentlemen have made purchases of some of the best sheep at the north, of various breeds, and are paying much attention to the breeding of them. Mr. Saml. F. Christian, near Greenville, Augusta county, has a flock of Merinos, which is said "will compare advantageously with any flock in the United States." Col. J. W. Ware, Clarke county, has a flock of Cotswolds, which are represented as of excellent quality. In a communication to the *Southern Planter*, Col. W. states that he has lately sold some of his Cotswolds to Mr. Christian, who intends hereafter to keep both Cotswolds and Merinos—breeding each separate and pure.

Devon Bull.—By reference to the advertisement of Mr. William L. Cowles, in this number, it will be seen that he has a young Devon bull for sale. We had the pleasure of seeing Mr. C's. stock at the Hartford Cattle Show, last fall. He has some excellent Devons. The originals of his herd were obtained chiefly from R. L. Colt, Esq., of New Jersey, though some of them, we believe, were bred by Mr. Patterson, of Baltimore. Mr. Cowles has now purchased the Devon bull *Rover*, formerly owned by L. F. Allen, Esq., of Black Rock. He is a fine animal, and has taken prizes at various shows.

Durham Cattle.—We would refer those wishing to obtain this description of stock to the advertisement of George Vail, Esq., in this number. Mr. V. has left us a memorandum of the weights of two of his calves, as follows: Bull calf of the cow *Hilpa*, dropped August 4, 1847, weighed April 11, 1848, 572 pounds; bull calf of the cow *Lady Barrington*, dropped August 29, 1847, weighed April 11, 1848, 582 pounds. Neither of these animals were in more than fair condition as to flesh.

Culture of Sumac.—A correspondent wishes to know how soon after the seed of this article is sown, a crop can be obtained, and the probable amount it would yield per acre. We should be pleased if some person will furnish the information.

Cattle for the Dairy.—A writer in the English *Agricultural Gazette*, describing the management of a dairy farm, says—"our meadows are poor and cold, and we require a hardy good milker; to procure which we have crossed Alderney cows with a well-bred Hereford bull, and have many excellent productions from these." Most of the cross-bred stock, he says, prove good milkers, and those which are not, pay well for fattening.

Plowing by Steam.—We believe one reason why plowing by steam has not succeeded better, is in consequence of commencing on a wrong basis. The common way of plowing by successive furrows has been adopted, requiring too much locomotion. The engine should be stationary or nearly so, and should work a strip of ground at least 2 rods wide, only moving from the work so fast as it accomplishes a strip of this width. This we believe is the proper principle to begin with; the particular mode of operating must be left to inventors. Its great superiority consists in this, that the force required to move the engine is diminished as much as the proposed width exceeds that of a common furrow.

Maple Sugar.—H. French, of Loudon Centre, N. H., states in the Boston Cultivator that he makes from 12 to 1500 lbs. of maple sugar annually, which sells from 10 to 12½ cents per pound. The labor employed in making this amount of sugar, is that of himself, a hired man and a boy, "with an occasional day's work" in collecting sap when there is a "large run." These men, however, it is said, take care of a large stock of cattle, and cut up a year's stock of wood during the "time of sapping." He taps the trees by boring into them to the depth of three or four inches with a three-quarters auger. Instead of using wooden spouts driven into the holes as commonly used, he takes pieces of sheet-iron, four to six inches long and two inches wide, bends them the narrowest way in the form of a half circle, sharpens the edges, and drives them into the bark of the tree under the auger hole. These form the spouts, and catch every drop of the sap. The wooden spouts obstructed the flow of sap, and being frequently cracked or split, permitted some of it to waste.

☞S. A. Law, Esq., in his address, states that the county of Delaware contains 31,000 cows, from which there are made, yearly, 1,560 tons of butter—being 800 tons more than the average quantity made by the counties of the State.

Coffee.—The French are noted for making good coffee. The mode of preparing it is to roast the berries (not *burn* them) over a slow fire, so that the aroma or essential oil is concentrated. By greater heat and more rapid scorching, as is too commonly practiced here, the qualities which impart flavor are mostly destroyed. The French only allow their coffee to boil up once, and then leave it to simmer in a close vessel till wanted. If it requires fining, ("*settling*," in common parlance,) a little pounded isinglass is said to be the best. It is best to roast the berries but a short time before using them, and when they are sufficiently cooked, they should be kept till used in air-tight vessels.

Notices of New Publications.

An Universal History of the most remarkable Events of all Nations, from the earliest period to the present time: forming a complete History of the world. W. H. Graham, New York.

We are informed that "the intentions of the author of this work have been, not only to enlarge the mental faculties, and to elevate the ideas of his readers, but to present the world in a new form, a Universal History, without prejudice and without partiality; being instructive for readers in general, and at the same time worthy of the attention of Philosophers, of Statesmen, of Lawgivers, and of warriors." We have received the first two numbers of the work, and from the attention we have been able to give, should think it well calculated to interest the reader. The style is easy and perspicuous, and the typographical execution of the work is neat and plain.

Transactions of the Agricultural Societies of Massachusetts, for the year 1847.

This is a work of 277 pages, comprising a digest of the returns made to the State Department from the various agricultural societies in Massachusetts, and published under the supervision of Hon. W. B. Calhoun, Secretary of State. This is the third volume which has been published on this plan—a plan which we highly approve, as it furnishes in a convenient form the most important results relating to agriculture which are from year to year brought out in various parts of the State.

The Family Kitchen Gardener—Containing plain and accurate descriptions of all the different species and varieties of Culinary Vegetables; with their botanical, English, French and German names, alphabetically arranged, and the best mode of cultivating them in the garden or under glass; with a description of Implements and Medicinal Herbs in general use: also, descriptions and characters of the most select Fruits, their management, propagation and culture: illustrated with twenty-five engravings. By Robert Buish.

The above is a manual of 216 pages, 12mo. The author is a practical gardener, of thirty years experience, and we think his directions for the culture of culinary vegetables, are generally better than those we find in most treatises.

Letters on Agriculture from his Excellency George Washington, President of the United States, to Arthur Young, Esq., F. R. S., and Sir John Sinclair, Bart., M. P.; with Statistical Tables and remarks, by Thomas Jefferson, Richard Peters, and other gentlemen, on the Economy and Management of Farms in the United States: edited by Franklin Knight.

The work before us contains not only the *fac-simile* letters of Gen. Washington to Sir John Sinclair, which have been given to the public in a previous volume, but the entire agricultural correspondence of Gen. W., so far as it could be collected—making a beautiful quarto of 198 pages. It is a work which should be read by every man, and especially by every *farmer*, in the United States. It presents the character of Washington in an aspect new to many of our countrymen, and one which it is delightful to contemplate. It has been too common, we think to view him exclusively or chiefly as a warrior; though it is evident that it was the *agricultural*, rather than the *martial* field, in which he was naturally prompted to move—that "rural sights and sounds" were more congenial to his feelings than those of "blood and carnage." His happiness was more promoted by the use of the plowshare than the sword. The weapons of war were adopted, not from choice, but from the necessities of his country, and at her urgent call; and though in this cause they were wielded with energy and success, they were retained no longer than was necessary for the accomplishment of a just purpose.

But we have not, at the present time, space for a lengthened notice of this work, but shall refer to it more particularly in our next number; in the mean time we would cordially recommend it to public attention.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, April 19, 1848.

FLOUR—Genesee per bbl. $6.50a$6.56—Ohio and Michigan $6.18a$6 25.

GRAIN.—Wheat, Genesee. per bu., $1.35—Ohio, $1.33—Corn, northern. 53a55c.—Rye, 75a76c.—Barley 75a87c.—Oats. 47a48c.

BUTTER—Orange County, per lb., 20a23c.—Western, dairy, 15a18 c

CHEESE—per lb., 6a8c.

BEEF—Mess, per bbl.. $8.25a$9.—Prime $5.25a$5 75.

PORK—Mess, per bbl., $10.12½a10.18¾—Prime, $8.75.

HAMS—Smoked, per lb.. 9a10c.

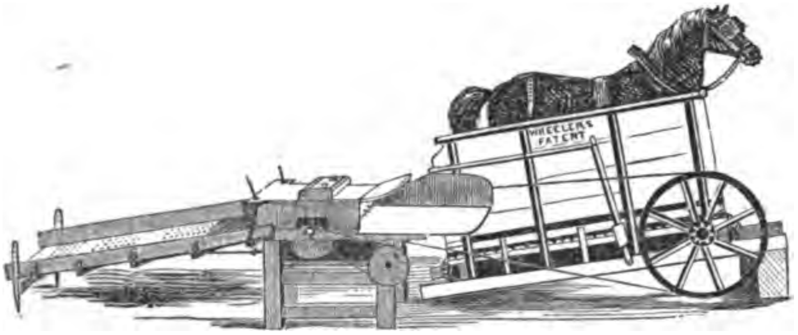
LARD—Ohio, per lb., in kegs. 7½c.

HEMP—Russia clean, per ton, $230.—American dew-rotted, $125a$140.

HOPS—First sort, per lb., 6a7½c.

WOOL—(Boston prices.) April 18.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,..................	40a45	"
" half blood do	35a38	"
" one-fourth blood and common......	28a30	"



WHEELER'S PATENT ENDLESS RAILWAY

Horse Power, and Over-Shot Thresher and Separator.

THE particular attention of Farmers is called to the following extracts from correspondents, showing the utility of, and the high estimation in which they are held by the writers and purchasers. The February numbers of the Cultivator for 1847 and 1848, contain full descriptions of them.

For prices see Catalogue of Ag. Warehouse, gratis at Store or by mail to all applicants.

Albany Ag. Warehouse Nos. 10 & 12 Green-street.
May 1, 1848. HORACE L. EMERY.

RECOMMENDATIONS.

As to the Horse Power and Threshing machine, my opinion remains unchanged. The principle I like. A short time since I had some laborers to work for me who, on seeing my power, remarked that they had heard that I had a baby threshing machine, from which the horses could eat the straw as soon as threshed. I told them they should judge for themselves. as I should use it the same day. In the afternoon I threshed with my two poney horses (fast walkers) one hundred and twenty-one bushels of oats in the space of one hundred and four minutes, which was the best refutation of the story they had heard that I could offer. J. G. STACEY.
Geneva, N. Y., March 3, 1848.

All the articles you sent me I am pleased with. Grant's Fanning Mill cleans as well as I could desire—Steven's Hay Cutter performs admirably.

The Horse Power Threshing Machine and Separator will turn out from the sheaf with four hands, one hundred and fifty bushels of wheat per day. Two horses or mules are quite sufficient for the power, running it the whole day or week without a change—200 large sheaves were threshed with it in 17 minutes, making 8 bushels of wheat. With good attention and a little exertion, 200 bushels of wheat can be threshed and cleaned in the best manner from sun to sun with two horses without a change.
Jonesborough, Union Co., Ill. ELIJAH WILLARD.

Dear Sir—Wheeler's Threshing Machine and Power, &c., which I purchased from you, has proved so satisfactory in every respect that the farmers around me, and all those who have seen it in operation, pronounce it in all parts the most durable, easy, economical and efficient contrivance ever invented.

I have threshed 2100 bushels of grain of all kinds with it, and it is fully up to all it is recommended to do. Many farmers say they would have no other machine for threshing—and I think you will have many orders for them from my neigborhood, as there is nothing like it manufactured in this country. J. N. ROTTIERS.
Lafargeville, N. Y.

The Horse Power Threshing Machine exceeds my expectations. With an elevation of only 16 inches I placed on my horses, weighing together 18 or 19 hundred pounds, which gave me sufficient speed to thresh: and as it became a little worn and smooth and well oiled, the speed increased to such a rate that I was obliged to feed it with all possible haste to keep the speed down. I have tested its power and efficiency, and find it to be equal if not superior to any I have seen both as to quantity and quality of its work, and easy work for horses. TIMOTHY D. WHITE.
South Hero, Vt., Nov. 19, 1847.

We each have had one one of Wheeler's Horse Power and Threshing Machines in use more than a year, and are gratified to say that they have proved all they are recommended to be—and we believe them in all respects, in simplicity, durability, economy, and efficiency the best machines in use. Having threshed all kinds of grain, and sawed a large quantity of wood for ourselves and about the county, &c., &c , we do not hesitate to recommend them to those wishing to purchase. M. L. CHAFFER,
Schoharie Court House, N. Y. ABRAM DIETZ.

Dear Sir—I have made thorough trial of the Horse Power and Threshing machine, and do most cordially acknowledge that it works admirably, and gives great satisfaction. I have allowed it to be used by one of my townsmen as a matter of experiment; and he is so well pleased with the operation that he has decided to purchase one the coming season—and I think my having this here may prove to you the means of many sales. H. H. W. SIGOURNEY.
New England Village, Mass., Sept. 24, 1847.

"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices see Catalogue of Agricultural Warehouse gratis at Store, Nos. 10 & 12 Green-street, Albany, New-York, or by mail.
H. L. EMERY.
May 1. 1848.

VALUABLE BOOKS

For sale at the Office of the Cultivator:

THE HORTICULTURIST, Vol. I, by A. J. Downing—bound in muslin, $3.50—stitched, in French style, to send by mail, $3.00.

THE CULTIVATOR, first series, 10 vols. quarto—stiched, $8.00. Second series, 4 vols. octavo—bound $1.25 per vol.—stitched, $1 per vol.

AMERICAN SHEPHERD, by L.A. Morrell—price $1.25.

THE AMERICAN VETERINARIAN, by S. W. Cole—price 50 cents.

DOMESTIC ANIMALS, by R. L. Allen—price 75 cents.

TRANSACTIONS of the N. Y. State Ag. Society—price $1 per vol.

AMERICAN AGRICULTURE, by R. L. Allen—price $1.

Prof. JOHNSTON'S LECTURES on Agricultural Chemistry—$1.25.

LANDSCAPE GARDENING, by A. J. Downing—price $3.50. Cottage Residences by the same auther—$2.

FARM IN MICHIGAN FOR SALE.

I HAVE a good improved farm of 145 acres, three miles from the village of Ann Arbor, for sale. Price $2200. Also 37 acres improved land one-half mile from said village—price $1200. Also 20 acres one and a half miles distant, for $500. Emigrants will do well to give me a call. WM. S. MAYNARD,

May 1, 1848—2t. Ann Arbor, Michigan.

P. SEYMOUR'S BROAD-CAST SOWING MACHINE.

THE undersigned is manufacturing this machine at East Bloomfield, Ontario County, N. Y., where he will promptly attend to all orders for machines, and all applications for the right to manufacture and vend the same.

This machine is the best implement in our country for the purposes for which it is intended. It sows *correctly* (and any desired quantity per acre) all kinds of grain, from peas to grass seed, including wheat, rye, oats, barley, buckwheat, hemp, clover and timothy seed; also plaster, lime, salt, ashes, bone-dust, &c. It is capable of dusting every square inch on a whole acre of land with less than half a bushel of plaster; and 30 or 40 bushels of lime may be thus evenly applied to the same amount of land if desired. It has recently been very much improved, and is now a very durable article, and recommends itself to every intelligent observer.

P. SEYMOUR,

May 1, 1848—2t*. East Bloomfield, Ontario Co.

STEEL CULTIVATORS.

THE subscriber having obtained, by deed from the original Patentee, the exclusive right to make and vend Rogers' Patent Improved Steel Self-Sharpening Cultivator teeth in the counties named below, is now prepared at his residence in Vernon to furnish to the farmers of Oneida, Madison, Oswego, Jefferson, Lewis, Chenango, St. Lawrence, Herkimer, Otsego, Broome, Delaware, Schoharie, Montgomery, Fulton, Hamilton, Saratoga, Schenectady, Albany, Columbia, Dutchess, Greene, Rensselaer, Washington, Warren, Franklin, Clinton and Essex, by wholesale and retail, ready made Cultivators or Teeth.

Agents—H. L. Emery, Albany; Henry Warren, Troy; Isaac Tice, Poughkeepsie; E. Gifford, Hudson; John Benedict, Saratoga; J. P. Clute & Co., Schenectady; R C. Wilson & Co., St. Johnsville; P. & E. Reed, Little Falls; Pierson & Giles, Cherry Valley; Sanger & Benedict, Utica; J. L. Merriam, Oswego; R. Norris, Sacketts Harbor; Calvin Arbour, Watertown.

Vernon, Oneida co., April 8, 1848—1t. ELIJAH WILSON.

YOUNG DREAD.

THIS celebrated horse will stand the ensuing season at the stable of the subscriber in Mayfield, Fulton county, 3 miles north of Mayfield Corners. DREAD is a beautiful bay, 17 hands high, and finely proportioned. He was at the State Fair at Saratoga, and took the 2d premium there in the first class of horses. Weight, when 4 years old, 1460 lbs. *Now five years old.*

Gentlemen sending mares from a distance may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse and all mares sent will be under the charge of the subscriber. Terms $10 if with foal, if not $1. Season, &c. by agreement. All mares put at the risk of the owners of said mares, also escapes.

SIMEON. CHRISTIE,

April 15, 1848—1t. Mayfield, Fulton co., N. Y.

PITT'S DOUBLE PINION HORSE POWER, SEPARATOR, AND CORN AND COB MILL.

I hereby give notice that I am now making a large number of the above machines, which I offer to those who wish to purchase as superior to any machine of the kind now in use.

For the information of those who are unacquainted with my Separator, I will say it threshes and cleans from three to five hundred bushels of wheat per day, and from six hundred to one thousand bushels of oats, and other grain in proportion.

The machine has proved itself superior to all others for the purpose designed.

It has been exhibited in various parts of the United States at State Agricultural Fairs, also in Canada, and has always taken the *First Premium*

My Double Pinion Horse Power has been in operation in Western New-York and Ohio for several years past, and is now admitted wherever it is known, for ease, convenience, strength, durability and cheapness of repair, to surpass any other Horse Power.

The Power is so constructed as to entirely obviate the danger and inconvenience of the large spur wheel, so objectionable in other Powers. It may be used to as good advantage with two horses as any two horse power, and is sufficiently strong and durable for eight horses.

Price of Separator one hundred and fifty dollars.

do Horse Power and Separator complete, two hundred and fifty dollars.

Five per cent. deducted for *cash*.

The Corn and Cob Mill I have enlarged to about double its original capacity, the teeth have been rendered more durable, which, together with other improvements has greatly increased its value. It is furnished with a hopper to feed loose grain, and a tube to feed corn in the ear.

The Mill gives general satisfaction, is durable, easily kept in order, and for the use intended is acknowledged superior to any other mill.

Price Fifty Dollars. JOHN A PITTS,

May 1, 1848. Rochester, Monroe Co., N. Y.

TO MANUFACTURERS OF SHINGLES! ATTENTION!!

THE subscriber in offering his machines to the public, claims them to be superior to any other article of the kind in use. It was patented by Jonathan Bennet in August, 1846, but has been presented to the public only about six months. It obtained the *highest* premium at the Fair of the American Institute, and the universal demand for it since its presentation to the public, claims its rank far above other improvements in this article. It forms two shingle at each descending motion of the gate, and *each from but to tip*, and the operation of jointing is performed by the knives, by turning the blocks previous to cutting. A more full description may be found in the January number of the Cultivator, page 27, and the sale of his article the subscriber will warrant the before mentioned particulars. Orders for single machines will be promptly executed and forwarded by the subscriber at Kent, Conn., via Housatonic Railroad, and for any part of the United States. Terms for machines and right of use from $75 to $100. For county or State rights apply to EBER S. PETERS.

Kent, Conn., May 1—1t*.

FARMS FOR SALE IN THE COUNTY OF MONROE, N. Y.

ONE of the handsomest and best farms in the town of Greece, within a mile and a half of Lake Ontario and the mouth of the Genesee river; and distant only seven miles from the city of Rochester and the Erie canal. The farm consists of 192 acres, well watered by an excellent and never-failing stream, and having about 20 acres of wood—commodious stone house, with pump at the kitchen door—frame barn, sheds, &c., and five acres of grafted fruit—and might be divided into two farms of 150 and 42 acres, equally well watered and supplied with fruit. The land in Greece is not surpassed in fertility by any in the State, nor in convenience to markets.

I will also sell the farm on which I live containing 52 acres; with five acres of choice fruit of every variety; good well, and a small but never failing stream; the buildings are of wood, more extensive and commodious than usual for a small farm: for I had fitted this for my permanent residence. The situation is naturally beautiful, well sheltered by shade and fruit trees, and overlooking Lake Ontario and Genesee river. These lands are fitted for wheat or stock raising, or both combined; and a contemplated Plank Road from the mouth of the river to Rochester, and the increase of business consequent on the steamboats and other vessels stopping here, by which a market for all minor articles, and especially for fruit, will be established, renders these farms very desirable.

Price reasonable, and one-third of the amount may remain on mortgage for some years. A considerable breadth of wheat might be put in this year.

Apply personally or by letter to JOHN MOXON,

May 1, 1848. Charlotte, Monroe County, N. Y.

TWO FARMS FOR SALE,

HANDSOMELY situated one mile north of Northville in the southern part of Cayuga county, each containing seventy-five acres of excellent land, in fine condition, with good farm buildings, orchards, &c. These farms are divided by the stage road between Auburn and Ithaca, equi-distant from each. They will be sold separately or together.

Apply to DAVID THOMAS, near Aurora, Cayuga county, or to ISAAC JACOBS, on the premises. 3 mo. 7, 1848.

PROUTY & BARRETT,

Manufacturers and Wholesale and Retail Dealers in Agricultural and Horticultural Implements, Garden, Grass, Field, and Flower Seeds, 194½ Market-St., Philadelphia,

OFFER for sale an extensive assortment of FARM and GARDEN IMPLEMENTS and SEEDS, consisting in part of the following, viz:—

Prouty & Mears' Patent Centre-draught Self-sharpening, Right and Left Hand, Subsoil and Side Hill, Wheel and Swing PLOWS, with Points and Shares so strong and thoroughly purified and hardened, that 100 acres of land have been plowed with *a single set*.

These Plows are constructed of the best materials, and of the highest finish, and for ease of draught and management, the facility with which their points and shares are turned and sharpened, the eradication of weeds and the thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, and the money refunded.

To these Plows were awarded **TWENTY-THREE PREMIUMS** at Trial Matches, during the past year, proving incontestably their great superiority over their numerous competitors.

Improved Cultivators, with steel teeth; Harrows, Revolving Horse Rakes, Agricultural Furnaces and Cauldrons, Corn Mills, Sugar Mills, Seed Planters, Corn Planters, Cheese Presses, Ox Yokes, Hovey's Spiral Hay, Straw, and Corn-stalk Cutter; Corn Shellers, Grant's Patent Fan Mills, and other approved patterns.

Spain's Improved Barrel Churn—Constructed in such a manner that the whole reel or dashers can be removed (whole) from the inside; the Churn is then clear of all impediments in the way of removing the Butter, and of a perfect cleaning.

Cast Steel Hoes, Shovels, Spades, Hay and Manure Forks, Scythes, Snaths, Briar Scythes and Hooks.

AGRICULTURAL, HORTICULTURAL AND FLOWER SEEDS, in great variety, raised expressly for this establishment by careful and experienced seed growers, and warranted.

☞ Orders solicited. Philadelphia, April 1, 1848—2t.*

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city.

April 1—tf.

HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's *best* two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—6t. JAMES PLANT & Co.

POUDRETTE.

THE LODI MANUFACTURING CO offer for sale their New and Improved POUDRETTE, at the following reduced prices: One barrel, $2; three barrels, $5; and seven barrels and upwards at $1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels ($3 worth) will suffice per acre, and bring a good crop; the labor being less than one half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B. Allen & Co, agents, No 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t*.

ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess or suffering injury from is use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles a ssmall as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

P. S Fluid Cataracts removed without an operation.

April 1—4t.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.
March 1—5t*. 107 Fulton-st., New-York.

A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in in front; has sixteen apartments, including kitchens and cellars A frame bank barn, with stone basement, 63 by 38 feet; the corner posts twenty-two feet six inches high With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr. Samuel Lawrence of Lowell, Mass, or Messrs Perkins and Brown of Springfield, Mass For terms appiy on the premises.

February 7th, 1848.—3t.* JOHN SMART.

ALBANY AGRICULTURAL WAREHOUSE.

THE subscriber hereby gives notice, that he has disposed of his interest in this establishment to Mr. HORACE L. EMERY, who will hereafter continue the business in his own name, at the old stand, Nos 10 & 12 Green st., Albany. All demands against the establishment will be paid by him; and all persons indebted to it, are requested to settle their accounts with him without delay.

Mr. Emery has had the entire management of the Albany Agricultural Warehouse since it has been in my hands, and from an acquaintance thus formed with him, and from his long experience in the business, having been engaged in it some ten years, five of which was spent in the establishment of Messrs. Ruggles, Nourse & Mason, at Boston and Worcester, Mass, (the largest in America,) I feel an entire confidence in commending him to the public as one in whose integrity and judgment the patrons of the establishment may safely rely

Albany, Feb. 1, 1848. LUTHER TUCKER.

N. B. The publication of the Cultivator and Horticulturist will be continued at the same stand as heretofore.

THE subscriber tenders his thanks to the public for the liberal encouragement and patronage shown towards the establishment since under his management, and hopes with the increasing interest manifested by the agricultural community for improvement and good tools, and constant and persevering attention on his part to the interests of the establishment and its patrons, to merit a continuance of the same He intends at all times to keep the best of implements, from the best manufacturers of this or other countries; also a full and complete assortment of Grain, Field, Grass, Garden and Flower Seeds; and all business will be transacted as heretofore upon the *One Price System*.

For prices, descriptions, &c., see Catalogue of Agricultural Warehouse, gratis, at Store, or by mail, to post-paid applicants.

HORACE L. EMERY,
Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, N. Y.

NEW WORK ON THE ROSE.

The Rose; its History, Poetry, Culture, and Classification.

By S. B. Parsons. New-York: Wiley & Putnam, pp. 280, royal octavo, with Colored Engravings.

A HANDSOME octavo volume, fully redeeming the promise of its title-page, which the reader will have noted takes in a wide field of practical and classical information. With the practical part of his subject, the culture and classification of the Rose, and with its history to some extent, we expected to find the author somewhat familiar, seeing that he is a well known and successful cultivator. But even in these respects, he has shown an amount of knowledge which we scarcely supposed any individual could have brought to their elucidation; while in the literature of the rose, so to speak, he has brought together such numerous tributes to its beauty, fragrance and emblematical character, as prove no mean acquaintance with the best poets. Indeed, his volume is at once agreeable, instructive, and curious, a very pleasant companion to the mere reader, while to the amateur and the professed cultivator of this most beautiful of Flora's gifts, it will be invaluable.—*N. Y. Commercial Advertiser*

Altogether this may be considered the most agreeable and complete work on the rose in the English language. The author has not only collected and arranged all of most interest and value that has hitherto been written on this subject, but he has interwoven through the volume a good deal of interesting information, drawn from his own experience and observation, which has not before been given to the public. The volume is not simply a practical treatise for the rose cultivator, but a pleasant contribution to the library of the scholar, or the book-table of the lady's boudoir.

The volume contains colored plates of two of the new Roses which have elicited most admiration within the last three years—*La Reine* and *Chromatella.—Horticulturist.*

We regret that this beautiful and really valuable volume did not arrive while we had room for a notice worthy of its claims to public favor. All that romance, poetry, and science have endowed the Rose with—all that philosophers have found, and lovers fancied, and ladies felt, about this garner of sweet associations, is here set forth, and worthily; while on two shining pages the beauty herself appears, fairly mirrored in her most magnificent aspect, and seeming only to ask the plucking. We love the book.—*Union Magazine, by Mrs. Kirtland.* April 1—2t.

NORMAN.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15¾ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500 The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner. *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and outhouses are new and convenient. A fine large orchard, embracing all kinds of choice fruit-trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the west.

March 1—3t. A. H. NICHOLS.

THE EAGLE PLOW.

PROBABLY no Plow has been so long before the public with so few alterations, come into so general use, or received so many, and of so high grade premiums, as the Eagle Plows, from the establishment of Messrs. Ruggles, Nourse and Mason.

Notwithstanding the great diversity of soils, modes of culture, and the increasing competition of many distinguished manufacturers, and year after year having been subjected to the most systematic, persevering and thorough trials ever had in this country, it still stands at the head of the list for excellence of work, materials, workmanship, durability and price.

By referring to the advertisement of the manufacturers in this and the last number of the Cultivator, will be seen the high estimation put upon them by committees and plowmen, as well as their very general use where they have become known.

It is but just here to state, that in the most important trials in New England, the plowmen are required to use the same plows and teams which have been used on their farms, not less than sixty days previous to the trials. The owners are required to hold their own plows, to perform a certain amount of work, usually one-eighth of an acre of a given width and depth of furrows, in a given time. All of which rules and regulations are made known months before-hand, thus avoiding very many difficulties which often arise in deciding who really merit the awards and premiums.

A full and complete assortment constantly on hand and for sale at *manufacturer's home prices at wholesale and retail,* at the Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, by

April 1. H. L. EMERY.

183 FRONT-STREET, NEW-YORK.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of Agricultural Implements of the latest and most approved patterns.

Plows adapted to every description of soil, embracing a greater variety of patterns than can be found in any other establishment in the United States.

Moore's highest premium Plows.
Freeborn & Hitchcock's do.
Minor, Horton & Co's do.
Ruggles, Nourse & Mason's do.
Prouty & Mear's do.
Subsoil do.

Two and Three Furrow Plows.
Side Hill and Double Mold do.
Cultivators with Steel and Cast Teeth.
Harrows plain and double hinged
Garden & Canal Wheelbarrows.

Single and Double Corn Shellers, price $5 to $10.

Straw Cutters, Greene's, Steven's, Sinclair's, and other approved patterns.

Mills for grinding Grain. Corn and Cob Crushers.

Horse Powers and Threshing Machines.

Fanning Mills,
Rice do.
Coffee Hullers,
Sugar Mills,
Grain Cradles,
Seed Sowers,

Revolving Hay Rakes,
Hay and Manure Forks,
Scythes & Snathes,
Ox Yokes and Bows,
Log and Trace Chains,
Spades and Shovels.

Plow Castings, Castings for Horse Powers, Mill and Gin Geer, &c., &c. Also on hand and made to order, every description of Brass, Copper and Iron Wire, Cloth, Sieves, Screens, Riddles, &c., &c., all of which will be sold as low as they can be purchased at any establishment in the country.

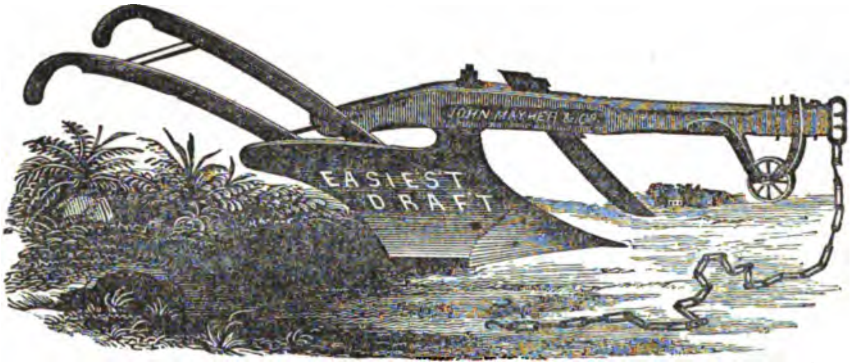
JOHN MOORE,
Ag. Warehouse, 193, old No. 183 Front-st., New-York.
April 1—3t

THE GENUINE MORGAN HORSE,

GENERAL GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of George A. Mason, two miles northeast of Jordan; Thursdays, Fridays and Saturdays at the stable of D. A. Munro, Camillus.

Terms—$10 the season. Insurance to be agreed upon. Pasturage furnished by either of the subscribers at reasonable prices. Escapes and accidents at the risk of owners. General Gifford was sired by *Gifford Morgan*. His dam a pure Morgan. Breeders of good horses are invited to call and see him.

April 1, 1848—3t. MUNRO & MASON.



JOHN MAYHER & Co's.
Highest Premium Improved Eagle Plow,
Manufactured and sold at the United States Agricultural Warehouse, 195 *Front-St., N. Y.*

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to cut out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island October, 1847, whose able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the whole Union,) running in its natural course, and keeping in its true position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Sneaths, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER & Co.,
United States Ag. Warehouse, No. 195 Front-st., N. Y.
March 1, 1848—3t.

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WATER PIPES FOR HYDRANTS, PUMPS, &c.,

Of	⅜	in. calibre, and	wg. from	1 lb.	8 oz. to	3 lbs.	8 oz.	per yd.
"	½	do	do	1	14	6	6	do
"	⅝	do	do	2	8	8	4	do
"	¾	do	do	3	8	10	8	do
"	1	do	do	5	10	14		do
"	1¼	do	do	6	12	17	8	do
"	1½	do	do	11		19		do
"	2	do	do	16	12	27		do
"	2½	do	do	23	8	50		do
"	3	do	do	28		59		do
"	3½	do	do	45		80		do
"	4	do	do	49		90		do
"	4	do	do	waste pipe.		15	14	do
"	4½	do	do	do		17	4	do
"	5	do	do	do		34		do

Prices of the above pipe 7 cents per lb. A. B. ALLEN & Co.,
May 1—2t, 189 & 191 Water-street, New-York.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* Leached Ashes, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,
May 1, 1848—6t. Cabotville, Mass.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent. lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers. E. J. BURRALL.
Geneva, April, 1848—6t.

FIELD AND GARDEN SEEDS.

POLE and Dwarf Beans, Beet and Mangel Wurtzel, Cabbage, Carrot, Cucumber, Melon, Onion, Peas, Pumpkins, Radish, Ruta Baga, Squash, Tomato, Turnep, and a great variety of other Seeds of the best kinds for sale at the New-York Agricultural Warehouse and Seed Store, 189 and 191 Water-street, New-York.
May 1, 1848—1t. A. B. ALLEN & CO.

DEVON BULL FOR SALE.

THE subscriber offers for sale a full blood Devon Bull, one year old in March last. He is a fine animal, got by a bull bred by G. Patterson, of Maryland, and out of a superior Devon cow. The price will be $75 if applied for soon. Address, post-paid,
W. L. COWLES,
May 1—1t. Farmington, Conn.

IMPROVED STOCK FOR SALE.

THE subscriber will take orders and execute them in the best possible manner, for—

Durham, Hereford, Devon and Ayrshire cattle. Price from $50 to $300 each, according to age and quality.

Saxon, Merino, Southdown, Leicester, and Cotswold sheep. Price from $10 to $30 each.

China, Sussex, Berkshire, and Lincoln pigs. Price per pair at three months old for the three first mentioned breeds, caged and delivered on board ship, $20. Price of the Lincolns, $30 per pair. These last are of a recent importation—color white, and grow very large.

All orders must be accompanied with the cash.
SAMUEL ALLEN,
mjulysept. 189 Water-street, New-York.

SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England,) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.
Troy, May 1st, 1848—4t.

AGRICULTURAL IMPLEMENTS FOR SALE.

SEED Sowers of different kinds, operated by hand, and arranged for sowing all sorts of Garden and Field Seeds in drills. They sow with equal accuracy, and with much greater rapidity than by hand. Price $4.50 to $15.

Bachelder's Corn Planter, operated by a single horse. This machine can be regulated to drop the corn in hills from one foot to four feet apart. Price $16.

One Horse Cultivators of various kinds. Price $5 to $8.

Hand Cultivators for garden work. They may also be used for field work. This is quite a labor saving little machine. Price $3.

Cast Iron Rollers in sections one foot long, 18 inches in diameter, and weighing 86 lbs. per section; sections of the same length two feet in diameter, and weighing 160 lbs. per section. These can be strung on an iron shaft two inches in diameter upon which they turn. They are fitted up for hand or horse power; and may be from one to eight feet long or more. The superiority of a roller made of several sections is very great. Price 4 to 5 cents per lb.; fittings extra.

Square and Triangular Harrows of various improved kinds. Price $5 to $15.

Plows and other Agricultural Implements, a large and complete assortment.

A Catalogue of the above of 100 pages, with numerous illustrations. This will be sent gratis to all who apply for it, post-paid.

New-York Agricultural Warehouse and Seed Store, 189 *and* 191, *Water-Street.* A. B. ALLEN & CO.
May 1, 1848—1t.

BLACK HAWK.

THE celebrated horse Black Hawk will stand for mares the ensuing season at my stable in Bridport, Vermont. Owners of mares at a distance can depend upon their receiving the best of attention if sent to this horse—pasturing and attention to mares, 25 cents per week. DAVID E. HILL, Agent.
May 1—1t

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.
Payable always in advance.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, JUNE, 1848. No. 6.

THE FARM OF CLARK RICE, ESQ.

Messrs. Editors—I was much gratified, in a recent visit to the farm of Clark Rice, Esq., in Dummerston, Vt., to find so triumphant an illustration of the profitable results of enterprise and good judgment, in seizing hold of the natural advantages of the farm, and appropriating them to use. These advantages consist in an abundant supply of swamp muck of fine quality, and the power to obtain and hold a large quantity of *surface water* for the purpose of irrigation. Mr. Rice's farm is mainly a grass farm, hay being the most profitable crop for his location and soil, and his operations are therefore conducted with a view to the raising of a large burden of grass, of good quality.

He has recently erected new barns which are remarkably convenient and well arranged; the main barn is 160 feet in length, east and west, by 30 feet in width, with ample shed lofts, and a horse barn and carriage house annexed. The ground upon which the barn is built is descending to the east, and under a portion of it is spacious barn cellar for the manufacture of compost, 100 feet long by 30 wide, open 24 feet on the southeast end; the lower side, or east end of the barn-yard, being on a level with the cellar bottom, affords a convenient passage into and out of it from the yard.

The liberal use of muck enables Mr. Rice to sell off large quantities of hay without detriment to the farm. He usually winters from 30 to 40 head of cattle, however, about half of which are stall fed, and the manure from these, composted with muck, together with other means of making compost hereafter described, affords him all the manure necessary for the improvement of his land, making and applying about 500 loads annually.

Management of Muck.

His bed of muck covers a number of acres from 6 to 8 feet in depth, and is a vegetable deposit of the finest quality. The original growth of timber on the adjoining land, was hard wood mainly, and whatever wash there may ever have been of an extensive area of higher land around the swamp, would naturally flow into it. Excellent arrangements have been made for the thorough drainage of the swamp, which will be more particularly described in speaking of his system of irrigation. The main body of the muck, except from March to the middle of June, when the gates are shut and the swamp filled with water for irrigation, lies high and dry from moisture to the depth of 5 or 6 feet, and can be got out at any time of the year, when most convenient to do the work. Two or three times in the course of of the winter, a quantity sufficient for a layer of a foot in depth over the whole cellar, is taken directly from the swamp on sleds, and thrown in, it being but a short distance from the barn, and the ground a little descending. In the fall, a coat of muck a foot in depth, is deposited over the cellar bottom, and when a sufficient quantity of manure has accumulated under the scuttles in the stable floors to cover the muck 8 or 10 inches thick, the same is spread, and another coat of muck put over the manure; repeating these operations from time to time, through the winter and spring, until the cattle are turned to grass. An immense quantity of compost is thus formed, and, judging from the smell and appearance, of the finest quality. A part of the muck is dumped through a scuttle in the barn floor into the cellar, and a part is thrown in through windows in the underpinning, and what cannot be conveniently spread from these heaps with the shovel, is taken up on wheel barrows, running on a plank, and distributed in due proportion; the design being to incorporate two parts of muck to one of manure. A larger proportion of muck is kept under the stable floors, where the urine flows, than elsewhere, and this saturated muck is spread into the middle of the cellar from time to time, in order to equalize the whole mass.

The compost lays in this state until after the spring work is done, when at odd jobs, such as rainy days and other days of leisure, it is forked over from end to end. After haying, it is carted out on to the land where wanted for the next spring's use. None of it is applied to the soil until a year old—Mr. Rice being of opinion that composts, where large proportions of muck are used, require to be fully ripened by age and fermentation, in order to derive the greatest benefit from their application to the soil.

Mr. Rice has been in the habit of applying 50 loads to the acre; 25 loads spread on the turf and plowed in, and 25 loads spread on the furrows and harrowed in. He has come to the conclusion, however, from recent trials with a view to ascertain the proper depth to bury compost, that he shall in future introduce the plow two or three inches deeper in breaking up his sward land, which his present facilities for makimg compost will warrant, and spread the whole dressing on top of the furrow, incorporating it thoroughly with the soil above the sod.

The building appropriated to the horse barn and carriage house has a cellar under the whole of it, and the manure of two or three horses goes into the part under the stables, into which muck is also thrown, from time to time, and 6 or 8 working hogs are faithful to their business of mingling and pulverizing the materials with which they are supplied. Bedding is freely used under the horses to augment the mass. Under the carriage house is the feeding apartment, also a kettle and arch for cooking their feed, and storage for the materials.

There is still another cellar adjoining this, which receives all the wash of the house and the night soil, and which is liberally supplied with muck to absorb it as occasion requires. The objection to such places generally is that they are difficult of access, but in this case it is entirely obviated, the cellar being sufficiently capacious to back a cart into it.

The barn-yard is constructed differently from any I have before seen. The main yard, where the fatting cattle run, is slightly descending to the east to another yard, which is well supplied with muck, and is calculated to receive the wash or superabundant moisture of the former. This arrangement gives him a yard free from mire and water, which at certain times is deemed essential to the comfort of the fat cattle, and to his own comfort and convenience in carting to and from the barn such large quantities of hay, &c. During the day the coarser forage of the farm is mainly fed out in the lower yard to the cows and young cattle, which run there, and the refuse of it is incorporated with muck by the treading of the cattle. Occasionally in the course of the winter, a moderate coat of muck is spread over it, this being deemed better policy than to put the whole quantity of muck that the yard will bear into it at once, in the fall. After planting in the spring, the contents of this yard are carted out into a heap for fermentation; it is immediately supplied with muck again, and the cows are yarded on it over night through the summer, excepting when too wet and miry from heavy rains, when they are for a few days turned into the upper or dry yard. In the fall, the contents are again carted out, and a fresh covering of muck put in for winter. The litter, &c., of the upper yard is also carted out in the spring and composted with muck, in all cases designing to use two parts of muck to one of manure.

Irrigation.

Mr. Rice's system of irrigation is in the highest state of perfection. At the breaking up of winter quite a brook is formed from the rains and melting of the snow. It may be termed surface water from the adjoining high lands, and probably its marked effects in increasing the quantity and quality of grass, may be attributable in a great measure, to the fact that it is thus formed, and not a living stream fed by springs.

A large embankment of earth has been thrown up on the lower side of the swamp, the other sides being surrounded by higher lands, and thus a large reservoir is made into which this temporary stream is conducted, and with which it is filled in March, and after, to the depth of several feet. Gates are constructed in the embankment to draw off this accumulation of water as wanted for irrigation, and they are also calculated for the thorough drainage of the swamp. The water is conducted in ditches at different heights, over 50 acres of grass land, which lies more or less descending from the swamp. The ditches run across the land at right angles with its descent, and the water is taken out of them by small outlets, made at suitable distances in the lower sides, so as to flow gently over the whole land.

The water is not let on to the land till after the frost is out in the spring, on account of its liability to wash holes by getting under the frozen ground; neither is it continued on the land after about the middle of June, or when the grass has grown so as to cover the ground completely; if continued on longer, the quality of the hay is injured. Mr. Rice considers that the greatest benefit is derived from the irrigation in April and May, on account of the early and vigorous growth it imparts to the grass;—this effect is no doubt increased greatly from the fact that the temperature of the water is considerably *warmer* by standing in the reservoir.

Care and judgment is necessary in managing the irrigation. Mr. Rice frequently passes over the land when under the process, and if any part of it is getting overcharged with water, it is taken off, or if any part is not receiving its portion, the same is supplied as soon as discovered. When heavy rains occur during the irrigation, it is stopped for a time; the object being not to drown the grass roots at all, but to keep them gently moistened.

The contrast between the irrigated land and the land adjoining, which is above the highest ditch and cannot be flowed, is very striking. The latter, although lying more level, and oftener plowed and manured, will not cut as much grass by one-half as the former, neither is the quality as fine. The irrigated land can be kept in productive mowing, much longer than other parts of the farm that have not the benefit of the water, it is occasionally plowed and manured however, and goes through a rotation of crops—no water being let on to any portion that may be under a state of tillage, until it is again in grass. The crop of grass on the irrigated land is not affected by any drouth, however severe, that may occur after the water is taken off,—the land having been well saturated, and the grass completely covering it, prevents the moisture from evaporating. The burden of hay is very heavy, and the quality excellent; the tendency of the irrigation being to produce a thick and fine bottom.

Seeding to Grass in August.

Mr. Rice has several acres of grass land too moist to plow and cultivate in the spring. He obtains fine crops of hay from this land by plowing it in August, when a light coat of compost is spread on top of the furrows and harrowed in; the land is then stocked down to grass again, without sowing to grain. The new seeding is fit for the scythe the next season, although later than the old fields. The process is repeated about every fifth or sixth year, or as often as the more valuable grasses are supplanted by wild grass. He considers this by far the best management of a moist soil.

Improvement of a light, hungry soil.

He has a piece of land rather inconveniently situated to get at with manure, upon which he is trying the following experiment to redeem it from a state of comparative sterility: it is sowed to rye in the fall, and stocked with clover early in the spring; the grain is taken off the next harvest, and the next year after, the growth of clover is plowed in and the same process repeated. The plan has proved very satisfactory thus far, the land yielding more than double the crop it did five or six years ago.

Planting a Forest.

Mr. Rice had, a few years ago, a piece of side hill in pasturing, of rather thin unproductive soil, which he plowed up and sowed to rye, at the same time planting to chestnuts in rows about four feet apart. After the rye was taken off the land was left to run up to a forest. The first growth or sprout from the chestnut was rather crooked and scrubby; but by cutting it close to the ground new sprouts started which grew straight and thrifty, and there is now a good prospect of a fine growth of chestnut timber—an article which is becoming more and more valuable in this section of country.

I have thus given a very imperfect sketch of some of the more important operations of this intelligent and prosperous farmer. His enterprise and skill in the use and application of his muck, together with the appropriation of his natural advantages for irrigation, have told wonderfully upon the productiveness and profit of the farm. Some twenty years ago he commenced operations on a worn-out farm, the whole produce, all told not filling the barn then on the place, 60 by 30 feet and now, with all his ample barn room, he has none to spare. Among other things, his operations show in a striking manner, the great advantage to be derived on our worn out soils, from a liberal and judicious use of *swamp muck*, and the importance and profit attending a strict husbandry of all the resources on the farm for making and saving manure.

In the language of the chairman of the committee of our agricultural society, for awarding premiums on manure:—"Every animal in the house or in the barn, on this farm, contributes something to swell the immense heap."—"We hope our farmers will soon learn that the process of making manure is not an impoverishing, but an *enriching* process, as is proved in the case of Mr. RICE, of whom his neighbors used to prophecy that this muck-hole would send him to jail. It has proved however, that in digging muck, he was digging money, instead of landing in jail."

It is evident to any one, in conversing with Mr. RICE and witnessing the operations of his farm, that he unites extensive agricultural reading with the most close and minute observation. He is a hard-working, practical man; and he has adopted no new theory or practice simply because *new*, or continued in an old one because old; but with excellent sense he has adopted those suggestions, from whatever source derived, that seemed applicable to his soil and condition. Starting in life with nothing but a willing mind and a doing hand, he has risen to his present position by the force of his own enterprise and good judgment. He has been compelled to advance slowly and cautiously in his improvements, making them no faster than they would pay for themselves, and now he has a farm and plan of operations that may safely challenge competition.

In this example we see, forcibly illlustrated, the value of agricultural reading, to the farmer who has the good sense to follow those suggestions that are applible to *his* soil, location and means. It is not to be expected that every practically written article published in an agricultural journal of wide circulation, can be of universal application, for soils, localities as to markets, &c., &c., must necessarily vary. The farmer, therefore, who fails to exercise suitable judgment in following the suggestions of others, has mainly to blame himself, probably, if he meets with disappointments; and instead of commencing a tirade against everything that is written by others, he may as well exclaim of himself:—

> "Poor Johnny Raw, what madness could impel,
> So *rum* a flat to face so prime a swell."

How many young farmers, commencing in life with heavy mortgages upon them, pursue the mistaken course of cutting off their wood and timber, plowing up their pastures every few years for a grain crop, without even sowing grass seeds, and inventing every other possible means to cheat "mother earth" of a crop, without returning her any equivalent;—in other words, "destroying the goose that lays the golden egg,"—and all from the plea that they are in debt. Let all such be reminded by the example of Mr. RICE, that this is not the true policy. Like him, let them seize hold of every means the farm affords for making and saving manure, thus increasing the crops and the reward of their labor, affording a more sure and expeditious means of liquidating mortgages, with a farm left worth cultivating; a farm upon which they may live in independence, with the pleasing reflection, in the evening of life, that theirs is an example safely to be followed by their children.

Further remarks, suggested by the example of this farmer, might be pursued, but the unwarrantable length of this communication admonishes me to forbear.
F. HOLBROOK.

Brattleboro, Vt. January 6, 1848.

MANUFACTURE OF CHEESE.

(*Mr. Fisk's Essay, concluded from page* 154.)

PRESSING.—When curd is properly tempered for pressing, a cotton or linen cloth is spread over the hoop, the curd is put in and pressed with from three to twelve tons weight, turned twice in eight-and-forty hours, into clean dry cloth. The press should be sure to follow down as the curd yields (when young,) to press out whey before a rind is formed to prevent its escape. There is no danger of too much pressure, *after the first ten minutes*. The press, hoops, cloths, &c., should be cleaned with lye *often*, to keep the rind from cracking. The cloth is taken from the cheese when it is taken from the hoop. The cheese is set on the table for a few hours until dry enough to absorb oil, and then painted with annatto, mixed in strong lye, (from common ashes) kept in a jar for ready use. This toughens the rind so that it will not require much grease after the first coat, to become smooth, if rubbed often with the hand moistened with oil.

The paint will fade to a rich butter color, which is as high a color as is desirable. A firm rind may be formed upon cheese when young, by a careful exposure to drying air, frequently rubbing with the hand, and no more oil than will readily incorporate with the rind. If more grease is used than will be taken up, it will sooner or later flake off, leaving the cheese scabby without rind, exposed to cracks, flies, mould, &c. Oil for greasing cheese is obtained from cream skimmed from whey, (after standing 24 hours;) it is churned till separation takes place like butter, then melted over a slow fire till it is turned to oil. A preparation of beeswax, from ⅛ to ¼, mixed with oil, will make a rind impervious to flies.

It is most desirable that cheese designed for foreign markets should be in proportion half as thick as they are wide, and not to exceed 100 lbs. in weight. The size of the hoop may be calculated from the number of gallons of milk; each gallon will make one pound of cheese. A cheese

21	inches wide	will weigh	14½ lbs	to each inch	in depth.
20	"	"	12 lbs	"	"
19	"	"	10½ lbs	"	"
18	"	"	9 lbs	"	"
17	"	"	8 lbs	"	"
16	"	"	7 lbs	"	"
15	"	"	6 lbs	"	"
14	"	"	5 lbs	"	"

Cheeses of the above proportions are banded with cotton cloth to keep them in shape. The band should not cover more than an inch or inch and a-half of the flat surface. Heavy cheeses must be banded with cloth that will not stretch, or their weight will make them ill-shapen.

In April, 1847, I divided curd into two equal parts, after it was salted, and ready to press, and pressed in equal and varied shapes to ascertain the result of varied heat, salt, &c. April 24th, (see schedule of April,) No. 1 was kept in a room of from 90 to 100 degrees heat; did not huff, but not having rennet enough to keep pace with the heat, soured, was hard, dry and smart; shrunk twelve per cent in sixty days. No. 2, kept in temperature not exceeding seventy-five degrees, did not huff, cured slow, was soft and mild flavor, shrunk nine per cent in ninety days.

April 26th, doubled rennet; put cheese No. 3 by side of cheese No. 1; No 3 huffed in three days, in twenty days run oil, tainted and spoiled. No. 4 put with No. 2; huffed, cured quick, and was light, porous and sharp. Doubling the amount of salt would control rennet, and keep cheese from huffing; but did not prevent them from souring, becoming hard and unmerchantable. The time of curing was in proportion to the amount of heat and rennet used. Some of the high salted cheeses in a hot room, *were bitter;* but none in the cool room had that flavor, were long curing, shrunk less, and were of better quality. The same course was taken in August, by dividing several days' curd, *each* day into three equal parts, pressed alike, and exposed to different temperatures in curing. The result was in favor of a medium rate of salt and heat, high salting and heat, making hard smart cheese; low salting and heat, soft, mild, and tasteless; low salting and high heat, porous, soft and sharp.

In 1845, the experiments alluded to, with sixty dairies, being got up expressly for shipment, a selection was made from the largest and most experienced dairymen in thirteen towns. A vigorous effort was made to reduce the whole practice to one general rule, consisting in *strict cleanliness in every department*, an equilibrium of heat in milk to set, not exceeding 90° with pure rennet to curdle milk in forty minutes; curd thoroughly worked by hand till as fine, when scalded, as wheat or corn; curd scalded in whey, with heat not exceeding one hundred degrees, and that heat held until the curd appeared shrunk, and would squeak when pressed between the front teeth. The whey to be drained off, and the curd salted while warm, with 2½ lbs. of refined salt to 100 lbs. of cheese, cooled and pressed forty-eight hours. Cheese half as high as wide.

These leading points, strictly adhered to, were found adequate to produce the article required, where curing rooms were constructed so as to preserve a *uniform moderate temperature.* The cheese, not affected by extreme changes of climate, fermented slowly and uniform, rind firm and smooth with little grease; texture firm and solid, yet malleable like butter; the flavor mild and pleasant. The weather being cool till June, a great uniformity was manifest in shape and texture. A sudden change of weather to 88 degrees, lasting several days, produced a contrast in different dairies, equal to the extreme in temperature, which was found in many dairy rooms to exceed the common atmosphere from 8 to 10 degrees. With little or no ventilation in these, cheese were much swollen, and could be kept in shape only by using *less rennet and more salt.* The *huffed cheese* remaining in same rooms become tainted, or generated a sharp, unpleasant flavor; those removed to a temperature suited to their constitution cured quick, and were well adapted to early home markets. Those salted high enough to stand the excess of heat, were hard, dry, crumbly and smart. A dry room was found best for a wet cheese, and a damp room best for a dry cheese; but in no case was a high temperature, (exceeding 75°) found necessary.

These and like experiments, too numerous to detail, confirm my conviction that much of the bad flavor complained of in the American cheese, may be prevented with proper attention to curing. In addition to the extreme changes of weather in our climate, which are more than sufficient to destroy the constitution of a well manufactured cheese, the practice *too generally prevails*, of placing cheese in some loft or upper room, least needed for other uses, and often next to a roof where heat concentrates, and cheese becomes *literally baked.* I deem such rooms best as are calculated to preserve an *equilibrium of low temperature.* A tight, spacious, studded and plastered lower room well ventilated, with northern exposure, where heat may be increased, and air dried by fire and ventilation, or cooled and dampened if required, by air from an underground or adjoining room, where ice may be kept, is *best adapted to this climate.*

Having previously written at considerable length upon *general treatment, adaptation of food,* I shall not here go into a lengthy detail, but a few hints may not be inappropriate. The success of dairy-men depends much upon adapting their practice to the provisions of nature. Cows should be in a condition to yield the greatest flow of milk, upon the cheapest and most spontaneous productions from the earth. Maize, manglewurtzel, cabbage, carrots, and ruta bagas (of the cultivated crops) yield the largest product per acre, and from the various periods at which they arrive at maturity, are well calculated to protract the flowing of milk till late in the season. Those most perishable to be used first. It is proved by experiments that a cow will give the most milk from the same amount of food, during the first sixty days after having calved. My cows yielded 45 lbs. milk per day the first of March, on 25 lbs. of good hay and 4 quarts of provender in slops. The first of June they diminished in quantity, and the first of November on same feed, they gave only 20 lbs per day. Other cows of equal quality coming in from the middle of April to the first of May, gave, on the first of June, 55 lbs. of milk on grass only, and held a good flow of milk through the season. On the first of December they gave 20 lbs. of milk each, while those in milk the first of March were nearly dry, upon the same feed, proving conclusively, that cows in general, will yield more and better milk from the first of May to January, than from first of March to January. The months of March and April require much more labor and grain feed, that would otherwise turn to money. *Nature* provides in *spring time,* a principle of *general progressiveness* in the animal and vegetable kingdom. The thriftiest growth of spontaneous products is in May and June, and cows should then be in a condition to receive its aid.

If seed of a spring crop is sown too early, the crop will be stinted; so with cows that calve in February and March. Nature having made its master effort in the animal economy, it cannot be revived again in spring-time of vegetation, and in the fall, when farmers have more or less of coarse perishable food, like pumpkins, apples, etc., they are not in as good condition to yield milk, as when they are started late, and their milk is kept up by sowed corn, or other succulent food.

I realized the greatest nett product of cheese in my dairy in 1844 and 1845. Commencing April 20th with half my cows in milk, average yield in 1844, 700 lbs. per cow, market weight. In 1845, average yield 775 lbs. per cow, weighed daily from the press, averaging five lbs. per cow per day during the first five months.

No *one kind of grass* or other food is found to produce as much or as good milk, as good pasturage upon soil yielding a great variety of grasses, each maturing at different periods, and furnishing in their turn the *flower of feed,* from which the finest flavor of butter and cheese is derived. Such soils are prevalent in this county, where the land is elevated and not over worn with tillage. Low, marshy grounds, and those having a northern or northwestern descent are exceptions.

A difference of from five to ten per cent is frequently shown by the lactometer in the quality of milk from neighboring dairies, the proof being in favor of those *best fed and cared for.* The practice is prevalent among dairymen of pasturing the low, wet and shady portions of their farms, (if they have such,) and using for meadows the more aired portions. In some locations, it is impossible to make a fine flavored cheese. The curd works tough and stubborn, and cheese is invariably of a harsh rank flavor. If this practice should be reversed, and the low lands used for meadows, and the elevated, warmer portions grazed, no doubt a great improvement would be made in our dairy products.

More care is required in working curd where whey and grain is fed, than when cows are grazed, as the milk is richer, and the cheese more apt to be harsh-flavored; when cows *are in heat*, their milk should not be put with the rest, till thoroughly cooled. It is often *rank and bitter*, and will sour in a few hours. If cows eat salt largely, beware of soft leaky cheese; it retards the effect of rennet to decompose. Salt should lay by the cows that they may take a little daily. Corn sowed *in drills* will produce more milk, arising from cultivation and the effect of sun and air. If fed when too old, it is not succulent, and will dry up the milk.

WASHING AND SHEARING SHEEP.

These operations are frequently performed at an earlier day than is proper in this latitude. Cold storms and frosty nights are not unfrequent with us till June, and before the middle of this month, we think it is unsafe to deprive sheep of their winter covering. The exposure and suffering which they are often obliged to endure after being shorn, is very injurious, sometimes producing deep-seated and fatal diseases, and in other cases suddenly overpowering the system and causing immediate death. Even with all practicable precaution the animal experiences a great transition, which must be very trying to the constitution, under the influence of cold and moisture. In fact scarcely a season passes that we do not hear of numbers of newly shorn sheep perishing from severe weather.

The process of washing, when sheep are immersed in very cold water, is also prejudicial to their health, and is besides objectionable from the imperfect manner in which the work is done under such circumstances. Exposed to undue cold, the men are impatient to get through their disagreeable job, and they hurry along without sufficient regard to the cleanliness of the fleece. The wool too, is by no means so readily cleaned in cold water as in warm. It is best, therefore, to defer washing till the water is raised to at least a *bearable* temperature. A shallow stream of soft water, in which, by means of a dam, the requisite depth can be obtained, is preferable.

It is proper that the ground at the bottom and around the water where the sheep are washed, should be of such a nature as not to render the water impure, and that the sheep may pass out after being washed without any mud or dirt coming in contact with their fleeces. To secure these objects, the reservoir is sometimes paved, extending the stones above the edges of the water till they are made to join a clean firm sward. Sometimes a cistern or vat, for washing sheep, is constructed and placed at the foot of the dam, and the water conveyed into it from the reservoir. We have seen sheep very nicely washed on this plan.

It is useful to sprinkle water on the sheep after they are collected for washing, and let them stand for a few hours before they are washed. This dampening of the fleece causes the impurities to separate more readily on washing, and the wool will appear beautifully white and clean. Leaving the sheep out in a warm rain, and washing them soon after, generally cleanses the fleece well.

Fine-wooled, or Merino and Saxon sheep, require much more attention and labor to wash their fleeces perfectly clean, than the coarser-wooled English sheep. The long-wooled varieties, as the Leicester, Cotswold, &c., can be washed without much trouble, so clean that the wool will scarcely shrink in weight in the hands of the scourer—or in the process of preparation for the manufacturer—whereas ordinary merino wool loses from thirty to fifty per cent.

The sheep should be kept in a clean pasture after being washed, till they are sheared, which should be done as soon as they become entirely dry, and they will require from four days to a week for this purpose. The best shearers should be employed—such as will cut the wool sufficiently close to the body, without cutting the skin, and at the same time cut smoothly and evenly. Each fibre should be cut once, and but once. The short bits of wool which are sometimes clipped off by shearers are worthless, and the torture to which the sheep is sometimes subjected by cutting its skin, is not only cruel but really injurious.

When sheep have been shorn, it is best to allow them to remain for a few days where they can have the benefit of shade. Exposure to a hot sun, while the animals are comparatively naked, frequently blisters the skin; and besides occasioning the animal much pain, evidently injures the quality of the first growth of wool. It deranges the cutaneous secretions and renders the wool harsher and drier. If they are allowed shade, they will not expose themselves to the heat of the sun, as they graze only at night and early in the morning. Should a storm, or unusually cold weather occur, the flock should either have the shelter of woods, or be driven to their winter quarters at the farm-yard, till the temperature becomes more congenial.

In regard to *securing the fleece*, the following remarks of Mr. Blanchard, proprietor of the "Wool-Depot" at Kinderhook, are deserving attention.

"After shearing, the fleece should be removed to a table or clean smooth place on the floor, with the inner part down; then be gathered up into as compact a position as it occupied when on the sheep; the sides of the fleece should then be folded over, so as to meet upon the back of the fleece; the head and neck thrown back so as to make the fold upon the shoulder; next be folded or rolled from the butt of the fleece and continued until you reach the shoulder. The fleece should then be snugly tied with a small smooth twine, passing round two or at most three times. You thus have a compact fleece, easy to open, and the shoulder, which is the the finest part, upon the outside. Buyers always expect to see *the best side out*, and wool growers sometimes do themselves injustice by not thus exhibiting their fleeces. I do not believe that the manufacturers, as a whole, in this country, are yet prepared to pay a sufficient advance beyond the present prices, to justify the grower of wool to remove all the fribs, belly locks, and skirts from the fleece, as is done with the fine wools of Germany. I would therefore, at present, put inside of the fleece all the well-washed and clean wool shorn from the sheep—carefully excluding all such locks as are filthy, or below the residue of the fleece in condition."

The *regular growth* of wool, in order to produce a staple of uniform quality is of great importance. Mr. Blanchard, on the occasion of delivering the remarks we have above quoted, (one of the weekly agricultural meetings held in this city last winter,) made some good observations on this point. He showed that the size of the fibre varied with the condition of the sheep; that while the animal was full fed, and was improving in condition, the fibre would be larger and stronger, and that when growing poor, the fibre would be smaller and weaker; so that in many instances, we have several qualities in the same fibre. He took a lock of wool, and by twisting it from one end to the other, demonstrated the correctness of his statement. The lock was composed of a certain number of fibres of equal length, but they formed a thread of nearly twice the size in some parts that it was in others. The wool had been taken from a sheep that was well fed in summer and poorly fed in winter. Mr. B. said he had frequently seen flocks that were well kept for a few months after shearing and then run down and kept poor till they were sheared again. The fibre at the lower end was weak and tender, and the fleece was greatly lessened in value. But "when the condition of the sheep is good, and they continue vigorous and healthy during the whole of the year, the fibre of the fleece will be free and uniform in quality, and the fleece heavier and more valuable than when they are alternately changing from a high to a low state of flesh."

If *fine* wool is the object, however, the sheep should not be too highly fed, as actual *fatness* induces the production of a gross fibre. The aim should be to keep the animal at *all times* in a natural and healthy condition.

NATURE AND USES OF YOLK.—It is well known that the manufacturer desires to purchase his wool as free as possible from any other substances. Whatever may be the effect of yolk on the growth or quality of the fleece, the buyer does not want,to pay for anything but *wool*, and of course makes a deduction from the price equal to what he supposes to be the weight of extraneous matters.

It has formerly been the custom in some sections, to breed a description of sheep, the fleeces of which were loaded to an extraordinary degree with animal matter; but the objection of the manfacturer to purchase this substance, has lately caused many wool-growers to prefer sheep which secrete but little yolk, and we think there is now some liability of the *fashion* running into an extreme in this direction.

The circumstance of the manufacturer not wishing to purchase yolk, is no proof that it is not necessary and useful for the production of wool. Take, for example, two fleeces of wool of equal fineness and quality, one of which, while it was on the sheep's body had a plentiful supply of this natural oil, and the other was destitute of it; which of the samples would really be most valuable per pound? Which would make the strongest and most durable cloth? No one can doubt that the latter would be altogether preferable for the purposes of *wear*, though perhaps this important point might not always receive its due weight with the manufacturer. In some instances he may pay more regard to those qualities in wool which will enable him to give his goods a handsome "*finish*," and to make the most yards from a given number of pounds. But we presume it will not be denied that light, dry wools have less strength than those which, while growing, are better supplied with yolk. Mr. YOUATT, in his treatise on sheep and wool, says:—"Where there is a deficiency of yolk, the fibre of the wool is dry, and harsh and weak; * * * where the natural [requisite] quantity of it is found, the wool is soft, and oily, and plentiful and strong." And again as to the uses of yolk, he says:—"It is not the inspissated perspiration of the animal; it is not composed of matter that has been accidentally picked up and that has lodged in the wool; but it is a peculiar secretion from the glands of the skin, destined to be one of the agents in the nourishment of the wool, and at the same time, by its adhesiveness, to mat the wool and form a secure defence from the wet and cold." LUCCOCK, also, (who is quoted by YOUATT,) observes that the yolk is necessary to the good qualities of the fleece, and that without it the wool becomes thin and light; "with it the fleece is full, soft and rich; * * and the qualities and condition of the wool are most wonderfully improved. From these circumstances we conclude that yolk is not only necessary to the production of a valuable fleece, but is the very pabulum of wool." He observes that the manner in which yolk acts upon wool is not accurately known. "Some," he says, "have considered it the superabundance of that substance which forms the filament, and which, by some unknown process, while the pile is growing, is consolidated into a transparent mass; while others conclude, perhaps more reasonably, that it is a peculiar secretion which exudes through the skin, and by intermingling with the pile, renders it soft, pliable and healthy, affecting it much in the same way as oil does a thong of leather, when kept immersed in it till perfectly saturated."

These remarks show the importance of the yolk or natural oil, to the growth and value of wool. But the fleeces of some sheep contain a secretion which is quite different from the *true* yolk above spoken of. It is a yellow, waxy substance, adhering to the pile, often attaching the fibres together so that their separation is difficult, and forming also a great obstacle to the thorough washing and cleansing of the fleece. It is frequently called *gum*. As it is not readily separated from the fleece by the action of water, it often adds much to the weight, even after the sheep are thought to have been "well-washed." Unlike the proper kind of yolk, it does not increase the strength and elasticity of the wool, but on the contrary, in some instances, by glueing the fibres together makes them liable to break in working.

But there is another point in this connexion which must not be overlooked. The character of the sheep, as to constitutional hardiness, &c., is in a great degree, indicated by the quality of the fleece. It is known to every observing wool-grower, that those fleeces which naturally contain the least yolk, are thin and light, and are produced by sheep of weak constitution. Such sheep require more delicate food, more shelter, and more care in all respects. On the other hand, those fleeces which are well supplied with yolk, are borne by hardy, strong-constitutioned sheep, which are able to bear exposure, and live and thrive on comparatively coarse fare. These characteristics render it an object of importance for the wool-grower to pay attention to the yolk in the fleece, both as affecting the quantity and value of wool, and the points on which the profits of sheep depend.

"Spare that Tree."

Following out the poetical sentiment above expressed, I would say to settlers on new lands, spare the beautiful trees. Select the site for your habitation, if the surface permits, on some gently-rising eminence, and if possible, in view of the "silver stream" or the "limpid lake," and with a park, you may have a lovely situation.

But how, says one, am I to eradicate the bushes and obtain a smooth, grassy lawn beneath the trees. Cut the bushes when the leaf is fully expanded, or during the season of their most vigorous growth. Pasture close with sheep, and you will be able to be rid of the under-growth in one or two seasons. Clear off the rubbish and sow grass seed, and you have done. I have a beautiful park of forty acres made in this way. R WATKINS. *Napoleon, Mich. April*, 1848.

PLANK ROADS.

We are indebted to **Philo White**, Esq., for a copy of a Report on Plank Roads, submitted by him to the Legislature of Wisconsin. This document furnishes a more full and complete exposition of the advantages of this description of roads, than we have before met with. The first question considered is, what kind of roads are best adapted to the present wants of the community? And though railroads are admitted to afford the greatest facilities under particular circumstances, yet it is concluded that there are many situations where a class of thoroughfares less costly, "and more practical *for every day use*," are called for.

The advantages of plank roads, over McAdam or stone roads, are, that the former can be made in all situations, without regard to the character of the soil; that they are less liable to be affected by frost, (which is sometimes very injurious to McAdam roads); and that they can be built and maintained at much less cost. It is calculated that horses will travel with wheel vehicles, one-fifth faster, and draw one-fifth more weight on a plank than on a stone road. "In fine," (says the report,) "plank roads are preferable to those of McAdamized stone in cheapness, in case of draught and in comfort to passengers; greater speed being attainable on them with less assistance to draught; and stage owners say that they are less fatiguing to horses than stone roads, at the same rate of speed."

Plank roads, it is said, were first made in Russia; and their first trial in America was in Canada, where they were made by Lord **Sydenham**, who from a long residence in Russia, had become well acquainted with them, and was thoroughly convinced of their utility. We are informed that the Canadians are now so well satisfied of the great advantage of these roads, "that they have gone more extensively into the use of them than any kingdom or republic on the globe." These roads are chiefly in Canada West—the aggregate length of the different lines already constructed, being between 400 and 500 miles. We are not aware of the entire number of miles of plank road actually finished in the State of New-York, but this report informs us that the various lines for the construction of which companies have been organised in this State, amount in the whole to a distance of 500 miles.

As to the *width of the track*, or the length of the plank used, the report states that it has been shown "most conclusively, that for a single track, eight feet is preferable to a greater width," and that where a double track is wanted, it is best to make them separately of that width. The planks are laid across the bed at right angles. In regard to the necessity of more than one track, the report quotes the remarks of Mr. **Geddes**, in relation to the Salina road. Mr. G. observes "great speculative objection was made in the start to but one track; but we have now the entire community with us in deciding that, on all ordinary roads, one track is fully sufficient. The reason is this: the travel in wet weather is entirely on the plank, except the turning out of the light teams; but they seek the plank again as soon as they can get around the team met or overtaken, so that the turn-out track is not cut with any continuous lengthwise ruts, and perhaps the wheels of not one team in a hundred turn-outs will strike the exact curve of another; consequently, in our experience, our turn-out track being well graded, passing the water easily and rapidly from its surface, remains perfectly hard and smooth."

Sleepers or Stringers.—In one or two instances, roads have been made without sleepers—the plank being laid immediately on the graded earth. The planks have kept their places quite well; but it appears to be the conclusion that it is best to use sleepers or sills.

"The sills," (says the report) "should be well bedded in the earth, their top surface barely in sight, and the earth in which they are embedded should be broken and pulverized, so as to leave no stones or other hard substances to obstruct their settling evenly, and thus permitting the earth to sink down firmly on the earth as its main support. Two stringers only are used on the Salina road, 4 by 4 inches in size and none less than 13 feet in length; they should be so laid as to break joints, as in laying brick, or putting on siding that is, the ends of the stringers on one side should not be laid opposite the ends of those on the other side. About 6 feet 8 inches is the proper width between the two lines of stringers, for an 8 feet single track road, which will bring them under the wheels of most road vehicles, and thus give a continuous bearing on them. One set of sleepers of good timber and well bedded, will last as long as two or three plankings."

Grading.—It is directed that the road should be graded twenty-one feet wide, "measuring from the inside top-lines of the ditches on each side." Great care should be used that the road be kept dry by means of side ditches and cross culverts. They should be made fine, firm and smooth.

In regard to lengthwise grading, it is observed that short rises are sometimes made of one foot in ten, though they are generally from one foot in twenty to one foot in thirty. Mr. **Alvord's** remarks on this subject are quoted. "It is easier to go over the same elevation on a plank road than on a common dirt one; for on plank there is no cutting into the substance passed over, nor encountering of stones by the wheels; and if, as it ought to be, the plank way is covered with a slight coating of earth, the only danger suggested, the slipping of the animal, is avoided. It would be a prettier sight for the eye, were we to grade our plank roads more level; but while their practical utility is not lessened in any perceptible degree by their unevenness, economy forbids the expense of *levelling* them for *ornament*."

The *kind of timber* used for planks is oak, hemlock or pine. Oak lasts as well as any wood, but is *slippery* in wet weather. The wear by abrasion is calculated at one-fourth of an inch in two years; "and as planking will not break through till one-and-a-half or two inches of the surface is worn away, it follows that the duration of the plank, [if of pine or other soft timber,] would be eight years." Oak would generally last, it is thought, fifty per cent longer.

The cost of plank roads is estimated at from $1500 to $ 2000 per mile.

Plank Roads preferred by Farmers.—The opinion is advanced in the report that "railroads can never be made to take the place of teams for the transportation of grain, &c., within one day's drive of a market, because the farmer can carry the cheapest for that distance."

"There are seasons when work is slack with almost every farmer; yet his teams are daily consuming as much food at such time as when fully employed. Availing himself of these seasons, he can haul his produce to market with a very few shililngs' expense, in addition to what would have been incurred had his team remained idle in their stalls."

The inducements for farmers to take stock in plank roads, are summed up as follows:

"Now in view of these facts and suggestions, it must readily occur to every farmer, within a reasonable distance of the line of a plank road, that he can better afford to take stock in such a company than any other of our industrial classes, because he can more cheaply pay for his shares,—by *working them out* on the road. Every head of a family, with his teams, scrapers, shovels, and other implements which are always at hand in the cultivation, &c. of his farm, could during those leisure times which every one occasionally enjoys, work out from one to a dozen shares, according to his force and proximity to the road, without any serious diversion of his attention from his regular vocation, or perceptive detriment to his crops. In fine, to all classes of farmers, no scheme was ever devised that afforded so rich an assurance of immediate and positive benefits to *them*, as the construction of plank roads in the neighborhood of their farms."

OXEN FOR FARM TEAMS.

Out of New England, a difference of opinion exists relative to the comparative value of oxen and horses for the business of the farmer, the great majority of agriculturists, by their practice at least, declaring their preference for horses. I say *out of New England*. because there I think the great majority of farmers maintain the opinion that oxen are preferable to horses for all kinds of farm labor. New England farmers are better acquainted with the real value of oxen, than farmers less accustomed to use them, and their opinion is entitled to consideration. In a communication made by the Hon. Levi Lincoln, of Massachusetts, to the Agricultural Society of Pennsylvania, he says: "So decided is the preference for oxen (here,) that I do not believe a single farmer can be found in this agricultural county, who performs his labor by horses without oxen; while there are *hundreds*, I had almost said *thousands*, who make no other use of horses in husbandry, than to furrow for planting, and plow among their corn for hoeing." This question of the comparative value of horse and ox teams, becomes an important one to the farmer, when it is recollected that the expense of his team, is a chief item in his yearly expenses. If ox teams are really more economical for the farmer, then a wide spread error exists, since in this, and in most of the states, horses are generally used, while oxen are either entirely unused, or but partially employed.

A common, and perhaps the prominent objection urged against the use of oxen, is that *they are constitutionally slow of motion*, and not to be depended upon in the oftentimes hurrying operations of the farm. As oxen are usually handled, there is something in the objection; it is believed, however, the fault is not a constitutional one, but the effect of injudicious training.

The common method of *breaking steers*, tends to make their movements slow. They are usually put into the yoke when two or three years old, and fastened at once to an old yoke of cattle, rendered slothful by labor or habit,—where they are worked until "broken," and forced to accommodate their movements to the tardy motion of the team that controls them. After having been tamed, and rendered obedient in this way, they are usually put to labor quite too severe for their age and strength,—and soon become "broken" in spirit. It is not strange that under such treatment, oxen are sluggish in their movements. By judicious training, oxen, as well as horses, can be taught to travel in any gait desirable for farm-labor; and any one unacquainted with the effects of careful training, with reference to rapidity of movement, will be astonished to see the difference produced.

The Devon breed of cattle has ever been esteemed for its working qualities, being excelled in speed at the plow, or even upon the road, by but few horses; and in their native country, it is said they are not unfrequently *trotted*, with an empty wagon, at the rate of six miles per hour. From this valuable stock, many of the working oxen of New England are believed to have sprung,—their color, form and action betraying their origin. Although the bulls of this breed are generally light, and the cows rather small, the oxen are large, furnishing all the size necessary and profitable for the yoke, and falling little, if any, behind their more pretending rivals, at the shambles.

Well directed experiments have demonstrated, that with proper treatment and training, the difference in speed between horses and oxen, in farm labor, is very little. Sir JOHN SINCLAIR, in his account of Systems of Husbandry in the improved districts of Scotland, when giving the experience of practical farmers on this subject, says that the ox teams upon the farms in Wooden and Mellendean, *when along with the horse plows, never lose a turn*. The issue of plowing matches throughout the country, has it is believed, established the fact that oxen can plow a given space of ground *as quick and as well* as horses. While oxen are more or less used in farming operations in the vicinity where I reside, custom has entirely driven them from employment in transporting goods upon the public roads. I suppose the alleged *slowness of motion* of the ox, has led to his disuse in this particular. In the early history of this county, when the roads hence to the Hudson river were new—passing through forests and surmounting many of the steepest hill, my father, in his business, employed heavy ox teams as well upon the roads, as in his farming and lumbering operations. I find, upon examination of his papers, that his ox-teams, heavily loaded going and returning, made their trips to Catskill, a distance of 66 miles, in *six days*, frequently in *five days*, or traveling *twenty-two miles per day*. Horse teams consume, *on an average*, the same length of time now,—traveling over roads for the most part carefully graded and well-worked—roads ten miles a day easier for a team, than those in use from 1800 to 1812. The heavy six-horse teams traveling upon the National road make but fifteen miles a day. Ex-Governor Hill, of New Hampshire, in a letter upon the use of oxen in the lumbering business of Maine, (as the same is quoted by Mr. Skinner,) says: "I have at this time cattle of my own raising, which have been taught to step quick, and having worked in the same team with horses, will, side by side, travel as fast, and plow as much in a day as the same number of horses. A pair of these oxen, will turn over with a plow that carries twelve inches, of the last year's corn or potato ground, or easy stubble land, from one and a-half to two acres in a day, working eight hours, four in the forenoon and four in the afternoon. Oxen well-fed with hay, and a portion of Indian corn or meal, will in the heat of summer stand it to work daily from eight to ten hours."

Another objection urged against the use of ox-teams, is *their inability to withstand the heat*. So far as my knowledge or experience goes, this objection is not fairly made. It is a common practice with farmers, during the hurrying season of farm labor to grain their horse-teams, and take such other care of them, as tends best to strengthen their powers of endurance; while it is a like common practice, to *feed no grain to their oxen*,—tasking their utmost energies in field labor during the day, and then leaving them to seek in the pasture, between sunset and sunrise, a restoration of their exhausted powers. Such oxen are often found *lolling* in the forenoon, and are pointed to as illustration of the fact that oxen cannot endure heat! Smarting under the lash, irritated by the bawling of an inexperienced and cruel driver, with a hot sun over him, and a stomach filled with green fermenting food, the ox faints at his labor;—and very wise lookers-on, shake their heads and say, "he can't stand the heat." Sage conclusion, very! In India and China, in the West Indies, in South America, in Spain, every where under the tropics, oxen are used for draught, or as beasts of burden, and their powers of endurance are as great or greater than those of horses. J. S. Skinner, Esq., on the authority of Commodore Jones, says, the cattle at Naples, employed in drawing timber for the government, constantly travel twenty to twenty-five miles per day, are as spirited and walk as quick as horses, and *appear not to suffer from heat more than a horse*. Mr. Skinner also says, "the small, pale-red, old field ox about Salsbury, in Maryland, will travel twenty-five miles in a day, with heavy loads of lumber going, and returning empty, over the sandy roads of that region; while it may be affirmed, after particular inquiry, that the distance made by the heavy-bodied, grain-devouring Conestoga horses on the national road, between Cumberland and Wheeling, averages not over sixteen miles, six horses with loads of from six to eight thousand pounds." A distinguished Virginia agriculturist says, "A gentleman of my acquaintance had a mixed team of horses, mules and oxen; in each season his horses failed first, the mules next, although both were fed upon grain and hay; and the oxen, fed exclusively on hay and grass, *finished the crop*."

When farmers become convinced that oxen, so far as farm labor is concerned, *are no slower*, or very little slower than horses, and *are as capable of enduring heat*, it is believed their chief objections to ox teams will be answered. To go to mill and to meeting they may need a horse, and for job work about their farms a single horse and a strong wagon will be found convenient.

In this connection, the difference in expense between ox teams and horse teams cannot but suggest itself to the farmer. In the original purchase of a *reliable* team, for farm work, the expense may be set down as follows:

Two horses at $85 00 each,	$170 00	Yoke of oxen,......	$100 00
Harness for the same,........	26 00	Yoke and chain,....	8 00
Whiffle-trees and neck yoke,	4 00	Ox cart,...........	35 00
Farm or lumber wagon,.....	70 00		
	$270 00		$143 00

Difference in favor of oxen, $127.

Animals of the horse and ox kind can be purchased cheaper than my estimate, but teams of a *less* market price cannot be called *good* or *reliable* teams. The comparative expense of keeping horse and ox teams, and keeping them *well*, is as two to three; or in other words, it costs a farmer *one-third more* to keep a horse than an ox team. In this estimate I make no reference to the difference in amount of manure made by the oxen, they giving back to the farmer a far greater amount than the same number of horses. In the estimate of profit and loss, to the farmer, there is another view of this question, which commends itself strongly to consideration. His ox-teams, from the age of four to eight years, when constantly laboring in his service, are just as constantly increasing in value. Experience having shown that well-fed oxen, when *steadily worked*, increase in weight, as fast as those lying unemployed; and when too old for service, with good pasture for a short time, are worth their original cost in the shambles. Oxen are also considered less liable than horses to diseases of a fatal character, or to those producing permanent infirmity. I need not speak of the *value!* of an old, worn-out horse, nor of the total loss which is incurred by the owner when his horse fractures a limb, or dies from disease. While oxen, when too old for the labors of the field, have still a value sufficient to replace them by a young and vigorous team; horses worn-out, or diseased, are *worse than nothing!*

Meredith, N. Y., March 31, 1848. S. A. Law.

Domestic Economy, Recipes, &c.

Preserving Dried Fruits.

In the March number of the Cultivator a correspondent wishes information in regard to preserving apples and other dried fruits, through the summer season, so that they will not become wormy:

The most effectual method I know of, is, when the fruit is dried and ready for packing away, as you put it into the barrel or sack, sprinkle it with whiskey—say at the rate of a pint to a bushel. We have tried this method for a number of years, and never knew it to fail; but when we neglected it the fruit always became wormy.

We have kept cherries, raspberries and currants for two or three years, perfectly safe in this way: I suppose any kind of spirits would answer the purpose, as the worms appear to go in for *temperance*. A Subscriber.

Another correspondent, who dates at Greenwich, and signs "An Old Housekeeper," writes—"I have kept them in perfect order for years, by putting them into a brick oven, after the bread has been baked, and letting them remain all night; afterwards putting them into linen bags which are hung up."

Another correspondent, C. J. says—"*Keep it from the flies*. I have kept apples in dry barrels or boxes with a piece of burlaps drawn tight over and tacked. They would perhaps keep still more safely *headed up*, but I have never tried that, apprehending some danger of moulding. Small quantities may be tied up in a tight bag and hung up. The same preventive applies of course to cheese, hams, &c. Tie a ham up in a tight bag, hang it up by the string of the ham; so that the bag will hang loose. If cheese inclines to crack, paste on good sound wrapping paper, in the same manner you would paste paper on the walls of a room."

Recipe for Preserving Tomatoes.

In answer to the inquiry in the April number of the Cultivator, as to the best method of preserving the tomato, I subjoin the following receipt, which I have tried and found perfectly successful:

Prepare the Tomatoes as for cooking (without seasoning, &c.) boil them one hour, then put them in small stone jars, cork and boil the jars for 2 hours, take them out and seal them *air-tight*; when opened, season, &c. and cook for half an hour. A Subscriber in So. Carolina.

Raspberry Vinegar.—The recipe for this very agreeable and useful article in the last number of the Cultivator, (page 160,) is deficient in one respect, viz. that it does not give the direction "*that the vessel in which it is to be made must be china or glass, and that no glazed or metal vessel is to be used in making or keeping it*." Mixed with water it is one of the most pleasant drinks of summer, and moreover is of singular efficacy in complaints of the chest—a spoonful or two in a tumbler of water. P. *Perth Amboy, N. J.*

CULTURE OF INDIAN CORN—FARMER'S CLUBS.

Editors Cultivator—At a meeting of our Farmers' Club, on Wednesday evening last, our secretary being absent, I took his place for the evening; and the enclosed reports were put into my hands. I have to-day copied them, and I take the responsibility of placing them at your disposal for publication. I do it for the purpose of giving you a sample of the kinds of reports which are presented. They are not selected, but are the only ones left with the secretary on that evening. Our society is not large—not more than 20 or 25 members usually attending ; but this is something for a quiet country village, with but few inhabitants.

The rule of our society is, to have two or three written reports on the subject for the evening discussion, which subject is given out at the preceding meeting, As yet we have not failed to have two or more at each meeting. After these preliminary reports, a familiar discussion of the subject ensues ; and then the reports and discussion are referred to a standing committee, to bring in at the next meeting, a final report embodying the substance of the written reports and conversation. By having these preliminary reports, the subject is fully brought before the meeting, by the various suggestions (and sometimes conflicting ones) in them, and the result is, every one has something to say upon some one point or other.

The order of proceeding at our meeting, is this : after the reading of the minutes, the reading of the reports of the standing committee on the subject discussed at the previous meeting is the first business; then the preliminary reports on the subject for the evening's discussion; next, discussion in a familiar way ; the subject for the next meeting is then given out by the chairman, and the writers named; then any miscellaneous business. The chairman sees that the members confine themselves to the question of the evening during its consideration, and then to other matters as they are presented, in order. All reports are put on file and preserved by the Secretary for reference. With this system the interest of our meetings has been well sustained, and the amount of information communicated has been a matter of surprise to us all. We have had no difficulty in drawing out the views of our practical men, and this is the secret of the success attending our efforts. I have been somewhat particular in stating our proceedings, as I have not seen any account of an organization like our own. The society was commenced with us as a matter of experiment, and as yet I think no one of its members is prepared to give it up, but evidently there is an increased interest manifested from one meeting to another. Should our example induce others to try the like experiment, my object in sending you this will have been accomplished.

Very respectfully yours, J. C. Hastings.

Report on the Culture of Indian Corn. Read before the "Clinton Farmer's Club," By Gaius Butler *farmer.*

The aboriginal name of this species of grain clearly indicates its origin. As an article of food both for man and beast, but especially for the latter, it holds a preeminent rank. Perhaps the loss that would be sustained by an entire failure of this crop could not be exceeded by that of any other. The well known fact that it may be and often is perverted from its legitimate to a pernicious purpose, is no valid reason why it should not continue to be raised, and to the greatest practical amount per acre, not refusing to gather even one hundred and fifty bushels, if we happen to find it there.

With these preliminary observations, I proceed to offer a few remarks on the best method of cultivation.

And first, negatively. According to the ancient Mohawk Valley custom, in directing the wayfaring Yankee, pointing out the wrong ways and then the right one, I propose to name a few things with respect to this question, that ought not to be done.

Do not plant corn on a piece of wet ground; on such land, unless in extraordinary seasons a failure may be expected. If it may seem necessary to till such a piece of land occasionally, the location of which is such as hardly to admit of thorough draining, crop it with almost any thing but corn, which delights in a dry warm soil. Do not plant corn after oats if it can be avoided. Oats are an exhausting crop, and as land can hardly be made too rich for corn, it will be found difficult to raise it to that condition necessary to ensure a good yield. Again, in fields where the wire-worm has long had almost undisputed possession, it is not advisable to plant your corn, as they will very likely save you the trouble of harvesting. A stiff clay does not seem well adapted to this crop. It is liable to suffer greatly from drought on one hand and from excessive moisture on the other.

A deep gravelly or loamy soil is the most natural element for this grain. My course has usually been to plant after wheat, and generally, to say the least, have obtained fair crops, seldom putting in more than two acres a season, and sometimes but one, believing it far preferable to give the land that tillage which will return 60 to 80 bushels per acre, than to run over some two or three acres to obtain that amount. As a general practice early planting is best. The entire growing season is not ordinarily much too long to mature the crop. Still it is doubtless better to wait a little if necessary than to hurry in the seed without being fully prepared. If the land designed for corn is not plowed till spring, once thoroughly done will be sufficient. There is however little danger of harrowing too much. Though I have said land can hardly be made too rich for corn, yet I have several times seen injury result to it by an injudicious application of very coarse manure. I would not be confined to any particular mode of applying manure, but would first administer a pretty generous allowance broadcast, and afterwards of the finest and richest portions in the hill. In planting I would not stint the hill to the precise number of plants intended to stand. Perhaps the following rule may not be far from the truth—One for the worm, one for the crow, and four to grow. The field now being planted needs close attention; whether there be any virtue in scarecrows (so called) I am hardly able to say, though I generally go through the ceremony of erecting divers sorts of fixings for that purpose. The owner's foot for the time being I know to be efficacious; crows generally do their worst where the hills are superficially covered. As a preventive in some measure to their depredations and for security against drought, I recommend that corn be covered nearly or quite the depth of three inches.

The corn being fairly up, do not wait long for it to become large enough to hoe, get among it with the plow or cultivator, and it will soon reach the mark. The boy who had his head combed but once a month, wondered how any body could submit daily to the torment of such an operation. He did not reflect that the daily operation which he dreaded, saved all the pain. So to some extent is the business of hoeing. The common practice is to hoe but twice, and this has been my own, till within a few years. Supposing that to hoe three times would add about one-third to the labor of tilling. This I find to be a mistake ; not only is the crop benefited by this course, but I have yet to learn that it causes any additional labor. A neighbor who usually planted in rows but one way and hoed twice, was induced a year or two since to change his method of planting, to rows both ways, and to hoe three times; one of the hands informed me that a gain of several days was made by the change, the same field having been in corn the previous year. Hilling corn is generally, and I think justly disapproved by writers on agriculture, and yet I find it difficult to hoe in such a manner as to leave the ground entirely level.

The last hoeing should be completed before the tassels generally appear. The labor of suitably preparing this ground for this crop, is not a trifling affair; but taking into consideration, the ample returns it is wont to make for all reasonable outlays, and that a succeeding crop is also at the same time amply provided for, there is every reason for doing up the work faithfully.

The practice of some, is occasionally to intermingle other crops with this, as potatoes and beans. I have no experience in this matter; but incline to the opinion that as a general rule, one kind of grain at a time on a given piece of ground is better than more.

A few remarks about harvesting, will close this report. The usual method was, formerly, to top the stalks after the corn was generally glazed, and put them in small stooks between the rows, and when the crop was ripe, proceed to husk it on the hills, or in some cases, to pluck off the ears, carry them to the barn, and then get up a husking-bee, an evening frolic for the youngsters of the neighborhood. I am not quite certain that any better method has yet been discovered, so far as the value of the grain is concerned, than to suffer it to remain on the hills till fully ripe, though it has been asserted by good authority, I suppose, that corn gathered into stooks, will produce more *whiskey* than when harvested by the first method. *If this be a fact, who can doubt the importance of its universal* adoption?

The proper time either to top the stalks or to cut up the crop and put it in stooks, I conceive to be, a matter of no small consequence. We are often told to do it as soon as the kernel is glazed. This I am sure is a mistake. I have done both in several instances, too early, and yet the corn had been glazed for some time. The consequence was, quite a shrinking and looseness on the cob. The stalks may be worth more at that period as fodder, but a diminished value in the grain will be the consideration for it. With the above explanations, and in view of the whole subject, especially with reference to fodder, I have no hesitation in giving my preference to gather in stooks.

Diseases of Animals.

Diseases of Poultry.

The diseases of poultry have seldom received attention in this country, from persons qualified to treat them judiciously. The management of this interesting and useful description of farm stock, both in sickness and health, is usually entrusted to children, or persons who are incapacitated for other business. The consequence is a general ignorance of their peculiar natural habits, as well as their diseases. But within a few years men of intelligence have turned their attention to this subject. This has been the case, particularly, in England, where the natural history and diseases of poultry have been investigated in a scientific manner.

We have been greatly interested with the articles of two correspondents of the English Agricultural Gazette, the one using the signature of "D. S. E." and the other "D." The former has written more frequently on the diseases of poultry, and the latter chiefly on their natural history and habits. In regard to diseases, we propose to give occasionally such abstracts of the remarks of the writer alluded to, as seem calculated to be useful to our readers.

FLUXES, SCOUR AND DIARRHŒA. The first symptoms of these maladies are an unusual looseness. "In the early stages," (says D. S. E.) "this is occasioned by a superabundant discharge of liquid from the kidneys. The first of these, scour, generally precedes the second, diarrhœa, which becoming habitual soon produces great emaciation, and gives rise to the third, fluxes. These last assume two forms, often attendant on roup, and are very fatal and difficult to cure. They are probably occasioned by a secretion of acid from the intestines. The first is characterised by the passing and adherence of a certain irritating calcareous matter, having a very pungent ammoniacal smell, very adhesive and acid, soon producing excoriation, which is succeeded by inflammation extending up into the intestines." In the second form of the disease, there is a constant flow of straw coloured fluid; and the last form is a blood flux.

The causes are believed to be exposure to cold and wet, improper diet, sour food, salted meats, the refuse of vegetables lying about the yard till they putrify, and corrupt the water sometimes standing on the surface of the ground from which the fowls drink; and lastly, a general neglect of the important requisite of cleanliness.

Cure. In the first stages of scours, the writer states that proper shelter, cleanliness and judicious change of diet, will often prove effectual, without medicine. If the disease progresses to the second stage, it is recommended to mix water from a blacksmith's forge with the water provided for fowls to drink; oxide of iron or iron rust, mixed in pellets of barley meal is mentioned as a powerful tonic and astringent. "Part of the yolk of an egg boiled hard, mixed with bruised hempseed, or boiled barley, diluted with wine, (gin is preferable,) is an old French remedy." Another remedy highly recommended, is water in which the rust of iron is infused with an equal portion of new milk.

In the third stage, fluxes, the writer states that he has found the following most effective: two parts castor oil with one part syrup of white poppies, combined. This, he states, acts quickly in checking the disorder. Two tea-spoonfuls is the quantity for a grown fowl. It is added, however, that this remedy when repeated will sometimes produce the contrary effect, when castor oil must be used alone as often as required.

For flux of blood, which is of very rare occurrence, alum, dissolved in the fowls' drinking troughs, is recommended to be used, and rice boiled in milk, with a little starch added.

CONSTIPATION is a disorder the reverse of the above. It is described as follows: "*Symptoms*—straining, very evident to the watchful poultry keeper; and when fatal is mostly owing to neglect or ignorance. *Causes*—deficiency of green diet; feeding too long on dry grain; want of a sufficiency of clean water, free access to which graniverous birds in particular require, owing to the peculiar construction of their intestines, as compared with quadrupeds. *Cure*—a moist laxative diet, boiled instead of dried grain. When the crop requires stimulating, as before stated, one or two teaspoonfuls of gin is preferable to cordial horse-ball, and castor oil to calomel, as often recommended; and soot and fresh butter rolled in barley-meal; chopped suet or fat in roasted potatoes, and also lard mixed, have been advised; and pollen and bran with lard. In very aggravated cases a little sweet oil as a clyster, has been said to be very effective. Rye flour or meal, to which is added a litte honey, is a French remedy."

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

HORTICULTURAL EXPERIMENTS.

I. Budding.

Peaches.—(*a*) Mr. J. J. THOMAS' advice, to cut down early in the spring, those trees that were not budded the first year, or whose buds fail, is vastly important. You thus get a good stock for budding.

(*b*) Budded peach trees in windy positions, *should always be braced.* The best mode is to set the brace, (a small stick eighteen inches long for seedlings of the first year,) very slanting, so as to push the tree towards the prevailing wind. Pass your bass around the tree, giving it two or three twists, before you tie to the brace. Thus you will have a kink between the trees and the brace which, with the slant of the stick, will perfectly save your tree from rubbing.

(*c.*) *Earthing budded peaches in autumn.*—I do this habitually, for the following reasons: It preserves the vitality of the bud in an open winter. It saves the important portion of the tree from mice. It saves the tree, in positions where heavy snow banks would be likely to settle, from being crushed and destroyed by the snow. In my sandy soil they never suffer; possibly they might in a heavy one. Remove the earth in the spring before the sap starts.

(*d.*) It may be useful to those who have failed to secure peach stones for planting, during the preceding autumn, to know that *the robber sprouts that always spring up about the roots of a budded tree after it is headed down, will grow.* They are not as thrifty however, as seedlings, certainly not for the first year, beyond which my experience does not extend.

(*e.*) *The removal of trees in the bud.—First, in the fall.* I removed 160 trees in the fall of 1846. They were two-year old roots, many of them very large, and were much mutilated in the removal. They were removed the first week in November, the roots being carefully trimmed. Exactly three-fourths of the *buds*, (and every *root*,) lived, some of them making six feet wood the next season.

Secondly, in the Spring.—April 23, 1847. Removed 137 trees, the buds having begun to swell. These trees were all poor roots like the preceding, and were besides, deprived of about one third of their roots, intentionally, (for reasons not necessary to be mentioned here.) Just two-thirds of them lived, and did well. Of those that died, a considerable number were dogged to death by the ants. Here it is well worth remarking that *one-third* of the trees which were set the *sun* side of a high fence, nearly every one grew, while the *two-thirds* that were set in the *shaded* side, exhibited almost all the deaths, whether outright, or from the attack of ants.

2. *Cherries.*—My budding on this tree has taken very rapidly, but no tree has caused me so much trouble in getting off the bass. The buds, after they were apparently fast and looked plump, have been very liable to loosen under the influence of wind and sun, and frequently crushed to death by subsequent rapid growth. My cherries had been sticked almost invariably to save them from breaking by the wind, just above the bud.

Some that broke thus in 1846, I sought to save by putting a slight layer of putty on the wounded top. But it did no good. This last year, (1847,) I applied Mr. J. J. THOMAS' mixture of tar and brick dust, apparently with entire success. Let it be put on with great care, so as not to cover the bud.

3. *Peaches on Plums.*—This has caused me more vexation and discouragement than all other labors of the kind put together. Of more than one hundred buds set in 1845, not one now survives. Of the same number set in 1846, but two are alive. *Errors.*—1. Late setting. 2. Careless unbinding. 3. Stock not thrifty. 4. Taking off the buds above the peach so clean that there was nothing to keep the stock alive above the inserted bud. The consequence was that some of my peaches died after they were a foot long, by the drying down of the stock. In the case of peaches and quinces, it will do to take off every bud, but not so with the peach on the plum.

4. *Spring Budding.*—In 1847, June 2d, 3d and 4th, peaches on peaches, and peaches on plums; failed entirely.

b. A pear took on a mountain ash. It grew about four inches, and is now, (Feb. 18th,) alive.

c. Plums on plums. A few (of Bolmar's Washington) took. They are now alive.

Adieu, with all my heart, to spring budding. It will do in the south, but it has nothing to recommend it in Central New-York.

II. Mildew in Gooseberries.

a. I have about forty very old mossy bunches of gooseberries. They have been occasionally manured, and trimmed severely every year. Of the four years they have borne me fruit, two exhibited fine and two mildewed fruit. The two seasons of good fruit seemed to be in consequence of sifting on strong ashes, once when they were in bloom, and once soon after. It was done when the dew was on in the morning.

b. So I had very fine fruit in 1847, on a patch of about three hundred young bushes, under the same treatment. Whether the alkali acts *directly* on the animalculæ that occasions this disease, or *remotely* by giving vigor to the root, I pretend not to determine. The fact, however, is valuable.

III. The White Blackberry.

A correspondent of yours considers this a new thing among the fruits of this fruitful world. I can only say that it grew in my boyhood in Rensselaer county, and that I found it in 1842, in Chautauque county.

White, black and red, are the prevailing colors of the berries of most brambles, and of the external covering of most stone fruits. Meanwhile chemists tell us that iron is the universal pigment of nature, wherewith she beautifies her fruits and flowers. Will not some of our learned vegetable physiologists, who have leisure, taste and ability for such investigations, tell us if they can, whether these different colors in the same species of fruit as the blackberry and currant, are in consequence of the *different conditions* of the oxide of iron in the soil, or of its absence from the soil entirely; or whether it be not the result of the *peculiar powers* of the plant itself, by which it appropriates it to its own peculiar purposes, or rejects it altogether. We may presume, however, that it possesses the latter power, since the same flower often presents various hues, and the same well elaborated garden soil different flowers; while different colors of the same fruit grow side by side in the same soil.

IV. Hawthorns—in this hot climate.

I fully agree with Downing and other writers on the unfitness of the Hawthorn for hedges, in this dry and hot climate. I wish to notice an interesting fact, however, in regard to this thorn. I have a plat of ground of less than half an acre, surrounded by a hawthorn hedge, on two sides—the west and the north,—the hedge being untrimmed, and from 14 to 18 ft. high. That on the west side is thick, thrifty and verdant, while that on the north is every way inferior, with nothing in the soil or adjacent cultivation to make this difference. And yet, I think I have lately discovered the reason. The rain storms in this vicinity are, with scarcely an exception, from the east or west. The consequence is, that the hedge on the west side gathers a large amount of rain, that would fall beyond it were the hedge removed, while that on the north side receives merely as much rain as falls upon the surface of the soil at its roots. Hence the thrifty hedge is profusely watered and the other not.

V. Fall planting of Gooseberry cuttings.

In the autumn of 1834, I carried some gooseberry cuttings 120 miles in hot, dry weather. I planted them, without much care, in good gravely soil, in my garden. This was about September 28th. In the spring of 1835, before vegetation, even in the gooseberry, could start, I had occasion to remove a few of these cuttings. In doing this, they presented white, thread-like rootlets, some of them six inches long, which must have been emitted the fall before. These cuttings made more wood during that season, three to one, than any that I ever set in the spring. The reason never occurred to me until lately. If I am wrong, will not some of your learned correspondents correct me.

I reason thus. The first impression of the declining heat of autumn was the more thoroughly to ripen the wood of the cutting at the top. Meanwhile the accumulated heat of summer lingered deep in the soil long after the air above became cool with the chills of autumn. Through the influence of this bottom heat, the process of granulation, at the bottom of the cutting went on, and the rootlets were emitted. In the spring, the plants started with considerable of the vigor of plants already rooted. On the other hand, cuttings set in the spring, feel the drying influence of the sun at the top, while the bottoms are immersed in cold earth, where the work of granulation and the emission of roots cannot go on. Those acquainted with the chemistry of heat, will readily perceive that the downward progress of heat in the spring is necessarily slow. Hence cuttings set at that season are in an unphilosophical condition, heat at the top and a chill at the bottom, when conditions exactly the reverse are needed for the speedy and certain growth of a cutting. Does not this experiment, and these principles apply to all cuttings; and have we not yet much to learn on this subject?

VI. Fruit trees in Clusters.

I have several plum trees growing in clusters of from three to seven stems each, growing from a common root. They are well trimmed up, and spread outward so as to form a round, open combined head. They have the advantage of being low, so that the fruit is readily gathered, while the tops are less exposed to the wind, both in blooms and in fruit. The trees in question are the Bleecker–(the Lombard plum of Downing,) and have been regularly derived from the original as sprouts. This form of tree has the single disadvantage of being less readily cultivated by the plow than straight single standards.

VII. Cherry Trees split by the Sun.

I have two cherry trees standing in a very hot position, which are badly split by the sun. Now I think that a board, a foot or more wide, and set in the ground close to the tree, with its top fastened to the tree by a single nail, would remedy this evil. This remedy, I think, would be better than straw bound round the tree which, besides presenting an unsightly object, affords a shelter for insects. In the case of very large trees, standing in hot positions, two boards nailed together at the edges so as to form an angle might be used.

VIII. Mixture of Beets and Carrots in seeding.

In the spring of 1845, I planted 3 or 4 pecks of the ordinary turnep rooted beets, of good quality, for seed. Close to them and separated only by the space between the rows, I planted about as many yellow carrots, also for seed. They seeded well. I sowed this seed in the spring of 1846. Many of my carrots were red and many of my beets yellow. The seed was ruined. Now, although these two plants are of the same class and order in the Linnean system, and probably of very nearly the same vegetable principles, yet considering the difference of herbage and inflorescence, who would have suspected their mixing? *Query.*—If we assume that red was the original color of the beet, may we not suppose that its varieties of other colors, were originated by such crosses as this? E. C. G. *Utica, March*, 15, 1848.

"Insects injurious to the Grape-Vine."

(*Cultivator for* 1848, *page* 151.)

By referring to the New-York Farmer for 1831, to the Genesee Farmer for 1832, page 133, and to Silliman's Journal for April, 1834, page 113, accounts of this troublesome visitor may be found. Nearly the whole colony on my vines, was extirpated by passing them between the thumb and finger; and by destroying the "minute worm or slug," which I found to be the larva of the same insect. Under this treatment, requiring no great amount of labor, we had grapes in abundance.

On my first discovering this depredator, a young student in Entomology, gave it the PROVISIONAL NAME of *Chrysomela vitivora*, from its feeding on the vine, but it appears to be the *Haltica chalybea*, (steel colored) of Illiger,—Haltica having been separated from the former extensive genus. D. THOMAS. *Greatfield*, 5 *mo.* 6, 1848.

"Destruction of fruit buds by frost."

(*Cultivator for* 1848, *page* 151.)

The blossom buds of the peach are so admirably formed—so dry, that like a grain of Indian corn, or a seed of the cucumber, they endure without injury any degree of cold to which this climate is subject. Their safety depends however, on their continuing *dry*,—for as soon as the sap flows in and *swells* them, they are liable to perish if the mercury in the thermometer, descends much below zero.

After the leaves drop in autumn, these buds become very sensitive in mild weather, either at that season or in winter. Sometimes indeed, though very rarely, the blossom opens in the fall—to perish of course. The danger appears to increase with the amount of development; and the same remarks apply to the fruit buds of the apricot.

Among the mountains of Pennsylvania, in a climate much more rigorous than ours, where the cold throughout the whole winter is steady, the peach tree is very productive: and some of *our* most severe seasons have been succeeded by plentiful crops of this fruit; but when the buds *start* in autumn, our hopes of plenty are founded entirely on the mildness of the weather that is to follow, for ten degrees below zero, have been sufficient to destroy them. D. T. 5 mo. 8, 1848.

Popular Errors.

EDIT. CULTIVATOR—The article quoted in your last number, from the Gardener's Chronicle, stating that "Balsam seed 3 or 4 years old, *saved from double varieties*, is pretty sure to produce double flowers, whereas one year old seed is almost certain to produce single blossoms," is sheer nonsense of the witchcraft class, and is on a par with the stale English notions that very old cucumber and melon seeds will run less to vines and produce more abundant crops than new seed, and with the silly idea that by placing melon seeds in a pantaloons' pocket for some time previous to planting, that the warmth will improve their quality or accelerate the maturity of the crop. All these and the visionary tales about planting seeds, and rearing crops at certain stages of the moon, which some of our least favored ancestors brought over with them from Europe, have long since been exploded by intelligent American minds. They nevertheless exist in full force among the benighted and uneducated population of many countries of Europe. The "Seventeen years Locust" will doubtless in time prove to be one of the same category. It is discreditable to the mind of man to yield a blind credence to any statement as to a result or effect, unless a cause is assigned that will afford conclusive grounds for our mental conviction. Flushing, March 6, 1848. Wm. R. Prince.

Albany & Rensselaer Horticultural Society.

The annual meeting of this society was held in Albany on the 6th of May. The following gentlemen were elected officers for the ensuing year.

President.—JOEL RATHBONE, of Bethlehem.

Vice Presidents.—D. Thomas Vail, Troy; Dr. Herman Wendell, Albany; Ezra P. Prentice, Bethlehem; V. P. Duow, Greenbush.

Secretary.—B. P. Johnson, Albany.

Treasurer.—A. E. Brown, Albany.

Managers.—Amos Briggs, Schaghticoke; Stephen E. Warren, Troy; J. M Lovett, Albany; Wm. Buswell, Troy; J. McD McIntyre, Albany; Jas. Henry, Watervliet; Wm. Newcomb, Pittstown; James Wilson, Albany; A. Osborn, Watervliet.

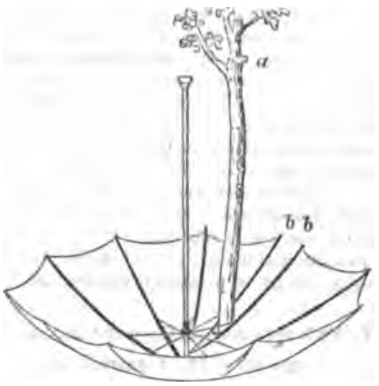
Exhibitions of fruits and flowers, will be held by this society as follows: At Albany, June 14th; at Troy, July 12th; at Albany, September —, annual show; at Albany, second Wednesday of February, 1847.

The Curculio.

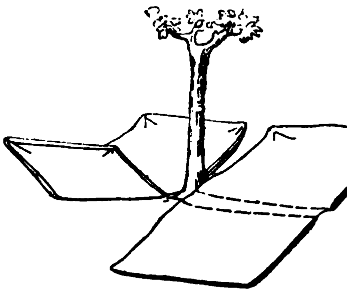
As it has been fully decided by fruit growers that there is no "royal road" to the destruction of the curculio, it becomes very desirable that the *common road* should be made as smooth as possible. Under ordinary circumstances, fine crops of plums, apricots and nectarines, cannot be obtained without protection from this insect, and it often happens that other fruit suffers from its attacks.

After trying nearly all the numerous remedies which have been recommended, we have come to the conclusion that for *general* application, the best mode is a combination of two—first, destroy all that is possible by jarring them down on white muslin, and secondly, suffer pigs and geese to pick up and devour all the injured fruit which falls. Where pigs and geese cannot be admitted, a more diligent application of the jarring will be effectual, but otherwise, these animals will greatly lessen the labor.

It has been urged, as a serious objection to the mode of jarring down on muslin, that the labor often amounts to more than the value of the fruit. Where this remedy is but imperfectly applied the time required for the extermination of the insect is prolonged, and the crop, besides, may be nearly destroyed. Hence a vigorous attack will be found altogether the most economical. To facilitate the work, we have adopted two different contrivances, both of which will be found essential advantages, and great improvements on the old mode of merely spreading white sheets under the trees. The first, is a large umbrella, (Fig. 45), with a white covering, with an opening or slit between, to stiff arms, *b. b*, to receive the trunk of the tree. The arms, or expanding radii, should be nearly straight when the umbrella is spread, and not curved as is usually the case. If they are made of bamboo, an umbrella six feet in diameter, will not cost more than two dollars and may be procured to order at any factory. In using this implement, it is spread, placed in an inverted position and passed under the tree. The blow of a mallet is given on the short stub of a limb, *a*, which will jar all or nearly all the curculios from the branches; the umbrella is then partly folded and shaken at the same moment, by which all the insects are thrown through an opening a few inches in diameter at the centre, made for this purpose, into a pail of hot water already provided, or into a shallow vessel of oil of turpentine, and thus their destruction is as speedy as complete. A hundred trees may thus be cleared in a few minutes, and if attended to twice a day, will certainly save the crop.



Inverted umbrella for catching Curculios—Fig. 45



Muslin on light frames, for catching Curculios—Fig 46.

Where the trees are very large, or where an umbrella cannot be conveniently procured, square frames, made as light as possible and covered with white muslin, as represented by Fig. 46, will answer a good purpose, but will not be quite so convenient nor expeditious as the former mode. Each piece of muslin is attached to two square frames, so that it may be folded together, like a book. This folding will throw the insects together, and then lifting the frame and inclining it over a vessel of hot water or turpentine, they are easily jarred into it.

The advantage of a white surface is the operator sees at once where the insects are, and whether he is accomplishing his work.

Disease of Fruit Trees.

I see by your periodical, that the pear tree blight is attributed to frost. I had a pear tree in 1846, attacked by a species of blight, (whether the same you have at the north, I cannot say) but this was a species of fungus; the bark became covered with small brown spots,

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[*] In general seeds saved from double varieties will produce double flowers whether it be new or old.

from which proceeded what I call its roots, like cobwebs, which adhered closely to and completely covered the bark. Last summer, which was moist and warm, it spread to some apple trees, (in fact over the apples themselves)—plum and mimosa trees and rose bushes, and I have no doubt they will all die this summer, as the pear limbs attacked in 1846, all died in 1847, the bark cracking clean to the wood in young twigs.

If you know of any cure, you would confer an obligation on me, and I doubt not many others, by publishing it. I should observe that peach trees in the immediate vicinity, entirely escaped.

North Vicksburgh, Miss. R. Y. ROGERS.

The blight described in the above communication, does not correspond to either the frost blight, or insect blight which are known here.

Budding once more.

See Vol. 4, *p.* 339.

Your correspondent R. T., is right as respects the mode of budding, but appears not to have *quite* discovered the *best time* to perform the operation.

In March, 1846, I received by mail from Rochester, N. Y., through the kindness of Messrs. ELLWANGER & BARRY, a slip of the "Northern Spy" apple, which when received was quite dry, and showed but a very little indication of life. I kept the scion in moist earth until the second week in April, when I put the buds, (10 of them,) on some young seedling trees, four of which grew freely, and made during that summer, about 10 feet of wood, averaging nearly three feet each tree. I used last spring a part of the buds of the growth of 1846, and have now, from that small beginning, about 50 trees of that noted variety of apple.

In August, 1846, I budded several cherry trees, which proved almost an entire failure; last April I re-budded 50 of the same trees, with buds taken from the scions of the Black Tartarian cherry, cut the previous February, 49 of them grew, some of which made the past season upwards of three feet of well ripened wood. I advise R. T. to try again as soon as the bark separates freely from the wood next spring, using buds cut from scions next month, and whether he succeeds or fails, communicate the result "for the Cultivator."

I know not how it may prove in New-England, but am satisfied that in Illinois, the months of April and May are the best for budding.

For the benefit of some of your western subscribers who have abandoned the cultivation of the Quince, under the impression that our soil or climate is not congenial to its growth, I remark that the quince may be inoculated on either of the varieties of our native thorn, and the bud takes freely. I have raised the large orange quince on the thorn the second year after the insertion of the bud, which was taken from a quince tree that had never shown any signs of fruit, although upwards of fourteen years old. The quince on thorn stocks produces fruit every year, while those on their natural roots do not bear any. Several quince-bearing thorn bushes may be seen in Mr. SLACK's garden, at Lewistown. J. D. *Fulton County, Ill., Jan.* 1848.

Strawberry Runners

These should be treated as weeds, and kept hoed from among the regular rows of strawberry plants. They have precisely the same effect upon the crop as the same quantity of weeds, and cannot fail to lessen the amount, as well as to diminish the quality. A writer in the Gardeners' Chronicle remarks, "So convinced am I of the propriety of cultivating this fruit in separate and distinct plants, and of cutting off the runners, that I have this season taken out a plant between each of my plantations, thus making the distance between each plant *four feet by three*.

Productive Apple-Tree.

Browne, in his trees of America, says there is an apple-tree at Romney in Virginia, which, according to Dr. Mease, grew spontaneously from seed, is estimated to be fifty years old, and has obtained a height of 45 feet, with a trunk more than a yard in diameter. In 1835 it produced 180 bushels of large fruit, besides four or five bushels left under the tree as damaged, and several bushels taken by visitors during the course of the season—so that the whole amount, in the opinion of Dr. Mease, must have been nearly 200 bushels.

The greatest quantity of fruit borne on a single tree in England, in one year, grew in Littlefield, Sussex, and produced 74 bushels of fruit—the total weight of the crop being nearly two tons.

Repeated instances have occurred in Western New-York, of trees of the Rhode-Island greening, with little or no cultivation, yielding single crops of more than forty bushels.

Bassano Beet

We observe that A. J. Downing, in a late number of his Magazine, describes this fine early beet as "oval" or "long turnip-rooted." We have cultivated it for several years, the seeds being obtained from different sources, and with us it has had invariably a *flat* root, like that of the flattest turnips, the horizontal diameter being usually twice the distance from the crown to the tap root. It has proved very early, sweet and delicate, and always remarkably productive,—where thickly planted, the roots literally touched each other, without a diminutive growth. Which is the genuine variety?

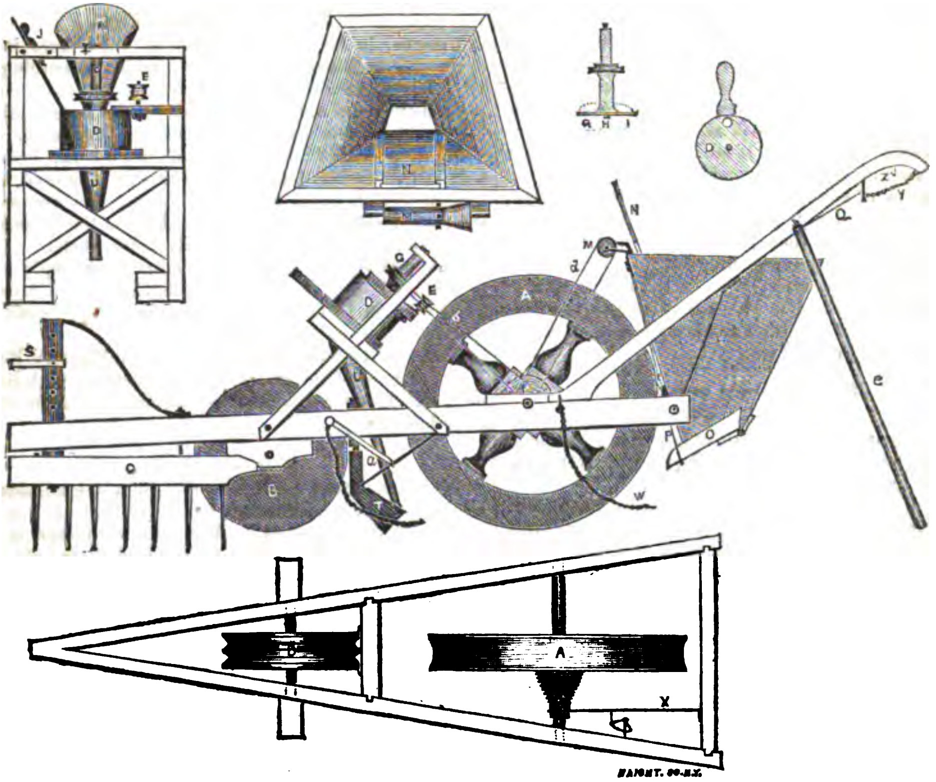
Fruit Stealing.

Some of our readers will doubtless remember the remedy published some time since against fruit stealing. James Matthews, Esq. of Coshocton, Ohio, thus speaks of this remedy in a letter to the Ohio Cultivator:—"We have found the article published in your last number, the best remedy yet known here for fruit-stealers and garden robbers. The *tartar emetic* works finely! A good dose will lay a fellow out limber for a while, as the sad experience of some here amply proves. It also clears out the stomach, prevents chills and fever, and creates a distate which very much diminishes thieving propensities."

"An' sure, and ye don't call it stealing, to get over and take a little fruit, do ye? Yes, we do, (says one of the Maine Farmer,) and the meanest kind of stealing, too. You wouldn't walk into that man's house and take his money from his drawer, nor his bread from his table; and yet very likely that bread and that money have not cost their owner half so much care, half so much labor, and are not half so much prized and valued as his fruit."

THE CURCULIO REPELLED.—A. J. DOWNING, in the Horticulturist, states that on two nectarine trees, (a fruit eminently liable to destruction by this insect,) standing near a stable yard, not a single puncture could be discovered, while others a few rods distant did not escape. This effect was attributable to the offensive fumes of the manure repelling the insect. The same journal contains a communication stating that the writer wishing to stimulate some old plum trees, left round them for a fortnight, uncovered, a heavy coating of fresh horse-manure, during the period of the swelling of the fruit. These trees bore fine crops; all others were stung, and dropt all their fruit.

LAMOILLE CO. AG. SOCIETY, Vt.—Fair at Hyde Park, Sept. 20th. Officers for the present year, ARIEL HUNTON, President; SAMUEL MERRIAM, NOAH ROBINSON, Vice-Presidents; L. H. NOYES, Treasurer; C. S. NOYES, of Hyde-Park, Secretary.



DESCRIPTION OF DRILL BARROW,

For planting Seeds, and applying Manures, such as Poudrette, Bone-dust, Ashes, Plaster, Marl, &c., at the same time.

A. *Main Wheel,* to propel the machinery and roll in the seed; made concave in order to press the earth to the sides of the seeds as well as upon the top of them. It leaves a slight convex ridge upon, and a little furrow on each side of the seed, so that rain may settle at the sides rather than immediately upon the seeds.

B. *Regulating Wheel,* to keep the Coulter at an uniform depth—made fluted to help pulverize the earth.

C. *Harrow,* to throw aside small obstructions, as also to fine the ground.

D. *Seed Box,* which may be drawn out for the purpose of emptying it.

E. *Tightening Pulley,* to accommodate the band to such groove on the gearing wheel F, and on the head of the elevator, as may be necessary to give the requisite speed to the elevator or dropper, secured by a thumb screw underneath. This screw must be loosened to shift the elevators.

F. *Gearing Wheel,* with grooves of different diameters, by which greater or less speed is given to the dropper; of course, putting in the seeds at greater or less distances apart.

G. H. I. *Elevators* or *Droppers,* of different sized holes, for corn, beets and turneps.

J. *Clearer,* of whalebone, secured by a wedge in the frame of the elevator, just so as to spring into each hole as it passes the guide tube U.

K. *Leader,* by which the seed box may be supplied without stopping the machine.

L. *Manure Box,* or *Hopper.*

M. *Rack Wheel,* connected by a band with gearing wheel F, and giving motion to shoe O, by connecting rod P; this may be raised or lowered by slides and thumb screws under it, on the hopper.

N. *Slide Guage,* to regulate the quantity of manure to be delivered.

O. *Shoe* to hopper.

P. *Connecting Rod,* conveying motion to shoe O, from rack wheel M.

Q. *Gearing Rod,* which upon being drawn, by pressure of the left hand upon chain Y, throws the gearing free from main wheel A.

R. *Pall,* to prevent a reverse motion to the machinery; also serves to clean the surface of main wheel.

S. *Clevis.*

T. *Coulter,* which by nuts may be set deeper or more shallow, according to the desired depth for planting different seeds.

U. *Guide Tube,* conveying seeds to the furrows.

V. *Chain for covering seeds,* attached to knobs on the outside frame, so as to draw in a curved form after the coulter, and before the main wheel.

W. *Chain* covering the manure upon the same principle as V.

X. *Spring,* acting upon the gearing wheel to keep it in its place when liberated.

Y. *Hand Chain,* by which to move gearing wheel.

Z. *Hook,* to retain hand chain, and keep the machinery out of gear.

a. *Leather Strap,* to confine guide tube.

b. *Band* to elevator or dropper.

d. *Band* to manure dropper.

e. *Legs,* resting on hooks when the Barrow is moving, and extended when standing still, to keep it from falling on its side.

The prevailing practice in that part of New-Jersey to which I removed in 1833, was, to plant corn in hills about six feet apart each way, manuring only in the hills. A few experiments convinced me that spreading a larger quantity of long manure and plowing it in was the better method; yet still I found it needful to add a little fine manure to each hill at the time of planting, in order to give the plant an early and vigorous start. This last process, however, was attended with considerable labor at a busy season, as I found it required full five days, man's work, to haul and distribute the manure, drop and cover an acre, if done properly.

I tried drilling corn in rows, but then to scatter the manure *nicely* in the drills, was a tedious business which I could with difficulty get common farm hands to do. Therefore, I set about contriving a *Manure Barrow* and Seed Dropper combined, and put in my principal crop with it in 1838, and continued to do so for the seven following seasons that I remained on that farm. My first attempts were not quite satisfactory, but I studied to obviate the difficulties as they occurred and to make improvements; the machine in its present state is the result thus far, and I shall be glad to see it further improved.

The accompanying drawing was made several years ago; since then the pulley M has been made larger, and a tightening pulley added to band d, both of which are improvements.

I have used only riddled manures in the machine, such as poudrette, lime, ashes, charcoal and bone dust. In my last planting of corn in 1845, I put eight bushels of bone dust, mixed with twice the quantity of charcoal dust to the acre, it being the first planting upon land recently underdrained. The yield was a good one.

With this machine and a steady going mule, a man has put in five acres per day; that is, plant, cover and manure it in drills. My practice was to plant twice as many kernels as I wished to stand, and where birds, moles and insects did not thin out sufficiently, it was done with a common hoe, cutting through the rows, leaving the strongest plants to average a distance of about eight inches apart. The drills being 4½ to 5 feet apart.

Once plowing the corn only, and then as soon as the plants were fairly up, so as to be plainly seen in the rows, going as near as possible and turning the furrows from them, afterwards keeping the ground loose and clean by the cultivator and harrow, I found to be the better practice. I am satisfied that hilling up corn is useless, and destroying the root by the plow worse than useless, both for the corn and the stalks.

The kind of corn of all the various sorts that I tried which in that section produced the greatest yield, is rather a large growing stalk, producing ears of fourteen to twenty rows mostly, red cob, the kernel a reddish yellow, or flesh color, something of a gourd seed or horse tooth shape, and a little indented on the top.

ROBT. WHITE, JR

New-York, 4 *mo.*, 1848.

THE FARMER'S NOTE BOOK.

The Norman Horse.

EDITORS OF CULTIVATOR—In the course of my remarks on breeding horses, recently published in the Cultivator, I have more than once intimated my intention to notice the Normans. This design would have been executed earlier had I been able to command my time. I have even now to regret that other calls press upon me so closely that I am compelled to give you but a hasty sketch.

The Norman horses now most used in France, are a cross of the old French or Norman draught horse with the Andalusian, or Spanish barb. The original breed was too clumsy and slow. The cross with the Andalusian has rendered them more shapely and active. I have examined the improved breed with a good deal of scrutiny. During my visit to France in 1846, I rode many hundred miles behind them, and saw many stables filled with them. The postmen and stage proprietors use them exclusively. I found them in daily service from four to twenty-four years old. Some had been driven fifteen or sixteen years. I found no lame or sickly horses in their stables—all appeared fat and hardy. They are driven before the mail coaches over routes of many hundred miles in extent, at the rate of eight miles per hour including stops; and I have many times seen one or more horses in a team trotting squarely and handsomely when the coach was moving at the rate of thirteen or fourteen miles per hour. They are of very uniform size and appearance—generally about fifteen hands or fifteen hands and an inch high, and weighing 1100 lbs.

The Norman horse lately purchased by Mr. Howland, of Union Springs, Cayuga County, is a very correct representative of the breed as it now appears in France. His sire "Diligence," is a better horse than any one I saw in France; and I have no doubt the stock of Mr. Howland's horse will prove a valuable acquisition to this section of the State. On good common mares of large size, he will get decidedly the best farm and draught horses that we can raise. I think the Norman horses and their crosses are better adapted to stage coaches and peddler's wagons also, and all places where quick and heavy draught is required, than any breed of horses of my acquaintance. I have no doubt that a pair of them, with a ton or more behind them, will perform a greater journey in a day or a week, than any other horses that can be produced.

Again, they are so hardy that there is but little trouble or risk in raising them. They mature so early too, that they may be sold at three and four years old for as much as they will bring when eight or nine. In short I consider them a very useful and valuable stock of horses. Respectfully, &c., J. B. B.

Syracuse, *April* 13, 1848.

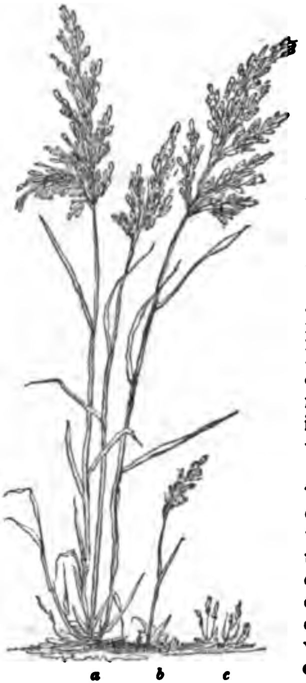
P. S. In my last article on breeding horses, your compositor has made me say that I have never known a successful cross of a *Morgan* horse on a highly bred mare. I wrote, or intended to write, that I have never known a successful cross of a *Norman* horse on a highly bred mare.

Large Corn Crops in Indiana.

I noticed in the January number of the Cultivator, 1848, page 29, an inquiry respecting the method of raising large crops of corn in the west. In 1843 I plowed up a piece of grass-land which had been pastured two or three years. Before plowing I spread over one-third of the ground about ten cords of common barn-yard manure per acre; turned the sod as even as I could four inches deep. Planted Northern Yellow corn from Western New-York. Harrowed each way, twice, and cut the weeds thrice—no hills made. Yield, 80 bushels per acre. Next season, 1844, spread on about seven cords of manure per acre on a little more than half the field, beginning on the same side as before, plowed once—laid off each way with a small plow—planted four feet apart each way, with *Baden*, and other corn common to this latitude, thirty eight degrees forty minutes. Harrowed and hoed as above. Average crop, 133 1-3d bushels per acre. The manured part supposed to be one-sixth best. THURSTON WOOD.

Madison, Jefferson Co., Ia., March 10, 1848.

Wheat and Chess.



Chess plant—Bromus secalinus.

Our readers are aware that a difference of opinion exists on the subject of the supposed change of wheat to chess. The practice of many farmers is in a great degree guided by their opinions; and it is important to know whether he who diligently and perseveringly endeavors to eradicate every plant of chess from his fields, may reasonably hope for ultimate success; or whether careful or careless practice is to be alike rewarded with success or failure.

Without intending to offer any thing of a controversial character, we wish to call the attention of farmers to some points in the character and habits of the chess plant, which we believe will explain some results otherwise apparently unaccountable; and assist in reaching the truth much better than the statement of many superficial observations, of what may appear at first striking cases of transmutation.

One of the most interesting and important points of character in the chess plant, is the difference in size and luxuriance under different circumstances. Under the thick shade of vegetable growth, plants have been observed scarcely two inches high, perfecting their seed, and impregnating with the seed, wholly unnoticed, the land on which they grew. This has been noticed in meadows even two or three years after seeding down with grass. But when this obstruction to its growth is removed, the young roots will send up several shoots, to three or four feet in height, and in some cases yield an increase of two or three thousand fold. The accompanying figure represents plants of chess, growing from seed precisely alike, but under favorable and adverse circumstances afterwards. *a* is a plant growing in good soil, without interference or obstruction; *b*, a plant partially shaded; *c*, a plant of the smallest size, under a very dense growth of wheat, or in a meadow. These figures are drawn from actual observation, and the relative sizes are correctly given.

Another character is, the small size and hardiness of the seeds of chess. Being much smaller than wheat, they often escape notice, and are sown and unconsciously spread; or escaping the teeth of cattle are distributed with their manure; or may be even spread by birds. The time they will remain in the ground, without vegetating, is unknown. But as pig-weed, fox-tail and other weeds, have been noticed to spring up in dense growth, on plowing meadows and pastures, which for a long series of years were thickly matted with turf; it is reasonable to suppose that the seeds of chess also may remain many years in the soil, ready to spring up and grow, when "clean seed" is sown on new or supposed clean ground.

Hence it follows, in consequence of the preceding facts, that when wheat is good, and has a fine thick growth, the plants of chess are small and entirely escape notice; the scythe does not perhaps touch them, although they ripen and spread their seed. But when the wheat is thinned or destroyed by winter; or when cattle get in and eat off the crop, or when it is destroyed by any other means, the obstruction to the growth of the chess is removed, and young plants, instead of remaining as shown by *c* in the figure, of diminutive size, it shoots up and spreads its heads far and wide, and produces a conspicuous and abundant crop. The wheat has disappeared, and chess has taken its place; hence the conclusion is very natural that the former has changed to the latter.

But as every good farmer is careful to destroy pig-weed and fox-tail, and avoid spreading the seeds, the same care should be extended to the exclusion of chess. Instances are by no means wanting where such care, persevered in, has entirely eradicated the plant; and when wheat on such farms has been destroyed by winter, no chess has taken its place.

Agricultural products of the U. States and France.

A writer in the English *Agricultural Gazette* makes an interesting comparison of the products of the United States compared with those of France. The population of the United States is set down at 20,000,000 and that of France at 35,000,000. The proportion of the agricultural population in America is given as 80. 4 per cent.; commercial, 2. 5; and manufacturing 17. 1. The writer observes that the agricultural production of the United States, compared with its inhabitants, is enormous, viz:—

	Horned cattle.	Sheep.	Horses & Mules	Pigs.
United States,	14.971,583	19,311,374	4,335,669	26,301,293
France,	9,936,538	32,151,430	3,192,337	4,940,721

He contrasts the grain crops of the two countries, showing the comparative amounts produced of each kind, in hectolitres, as follows:

	Wheat.	Barley.	Rye.	Oats.	In. Corn	B'ckwheat
United States,	30 millions.	1½ ml's	6 ml's.	44 ml's.	135 mls.	2½ ml's.
France,	69 "	16	27	48	7	8

"The United States," (says the writer,) "produce annually 70,000 tons of wool, 600 tons of hops, 300 tons of beeswax, 10,000,000 tons of hay, 95,000 tons of hemp and flax, 100,000 tons of tobacco, 40,000 tons of rice, 395,000 tons of cotton, 60,000 lbs. of cocoons of silkworms, 77,000 tons of sugar, and 5,000 hectolitres of wine. The produce of the farm-yard, or cow-house, is estimated at 7,000,000*l.* sterling—($35,000,000); that of the orchards, 1,560,000*l.*; forests, 2,720,000*l.* The total amount of agricultural produce, amounts yearly to the enormous sum of 138,730,160*l.* sterling—($693,650,800.) The manufactures of the United States, though yet in their infancy, are rapidly increasing, and the writer puts down the amount of capital embarked in manufactories of various kinds, at 56,757,912*l.* sterling. Considered in all respects, therefore, he concludes—"America may be classed next to Great Britain, as the second agricultural and commercial country in the world."

Long and Short Eggs.

"D.", a correspondent of the English *Agricultural Gazette* shows that the old notion of "long eggs producing cocks," is unfounded. His first argument is, that "to every hen belongs an individual peculiarity in the size, form and color of the egg she lays, which never changes during her whole life-time, so long as she remains in health, and which is, as well known to those who are in the habit of taking her produce, as the hand writing of their nearest acquaintance. Some hens lay smooth, cream-colored eggs, others rough, chalky granulated ones: there is the buff, the snow-white, the spherical, the oval, the pear-shaped, and the emphatically egg-shaped egg. * * * * Now I assert that the hen who lays one round egg, will continue to lay all her eggs round; and the hen that lays one oblong, will lay all oblong. Consequently one hen would be the unceasing mother of cocks, another must remain the perpetual producer of pullets, which is absurd. * * * An old lady, whose fowls were all white, gave me a small globular egg, as round as a ball; it was added to a clutch of speckled Dorkings. The result was the due number of Dorkings, *and one white cockerel*. By the rule alluded to, it should of course, have been a pullet."

"Another supposed test is the position of the air-bag at the blunt end of the egg. We are told that 'if it be a little one side, it will produce a hen; if this vacuity be exactly in the centre, it will produce a cock.' But take a basket of eggs; examine them as directed, by holding them between your eye and a candle, and you will find very few indeed in which you can say the air-bubble is exactly concentrical with the axis of the egg. A cock ought thus to be like Ovid's black swan, a rare bird. But in many broods, the cockerels bear a proportion of at least one-third; especially in those hatched during winter or in unfavorable seasons; the immediate cause being, doubtless, that the eggs producing the robuster sex, possess a stronger vitality; the more remote cause being the same wise law of Providence, through which in the human race, more males are born into the world than females, to meet the wear and tear of labor and accident."

Farming on Long Island.

Perhaps you would like to hear something about this place—situated on the extreme east end of Long Island (North Branch.) Although generally considered as almost out of the world, and almost unknown, we think it is "one of the places," for farming operations, if nothing else. It probably contains between five and six thousand acres, and except a few hills and rocks on the Sound side, it is as level as a western prairie. The soil is excellent, and land is worth $100 per acre. We are favored in having unusual facilities for fertilizing our soil. Great quantities, probably thousands of loads, of seaweed are annually collected, and add greatly to the products of the barn-yard and hog-pen. Between three and four millions of *moss-bonkers*, [fish.] also, are generally taken yearly in our harbor, the greater part of which are spread on our corn and potatoe fields, or buried in heaps to be spread on wheat and turneps. The farms here are small, averaging perhaps 30 or 40 acres, but I think you would be surprised to see the large quantities of produce sent off yearly. The principal are wheat, corn, potatoes and turneps.

I venture to say that there is not a village in the state, where there is a more equal distribution of property than here. There is scarcely one but what possesses a competency. We feel the want of nothing so much as timber, though some own woods in the adjoining country.

Our fencing stuff is brought from Connecticut and costs from 8 to 12 dollars a hundred—good three-rail fence costs 60 or 80 cents per rod, exclusive of labor. Every farmer has this tax on his income. Now can you tell us of something cheaper to fence our lands? I have thought of hedges, but the objections made are that they take up too much land, and that it is too much trouble to start them. I should like to see something more explicit in regard to their cultivation—to what extent they impoverish the land—how long they must be protected from cattle, &c.? C. N. B. *Orient, L. I., April*, 1848.

Protection for Bees.

Bees in their undomesticated state, have sufficient protection against the frost of winter in the thick sides of the trees which they inhabit. A like protection was afforded by the straw hives formerly used; but the thin boards of which hives are now generally made, leave the bees so much exposed, that multitudes in almost every hive perish with cold, and not a few whole swarms. Burying them in the ground, and carrying them into cellars, have been practiced with good success; but these methods are inconvenient and not often adopted.

A method which I have for several years adopted, I have found very convenient and successful. My bee house is so broad as to admit two rows of hives, one fronting one way and the other the opposite. I place my hives eight or ten inches apart, and fill the spaces between and about them with straw, leaving the mouths of the hives unobstructed. I leave the straw about the hives late in the spring, till the old bees and the young brood will be secure from injury from late frosts. I have generally used pea straw lest mice should enter it and molest the bees; but I have used clean threshed wheat straw, and have never suffered any injury from it.

E. D. Andrews.

To Farmers.

Why is it, that the effort and enterprize of the commercial and mechanical part of our population is crowned with so much success, while, with a few exceptions, compared with the great mass, the efforts of our farmers but just enable them to live? Is it not for want of the proper direction of their energies to the object sought? We hear daily of merchant princes, of manufacturers who accumulate immense wealth, of bankers who control large amounts of our circulating medium, and these several classes, with our professional men, are those who govern the affairs and direct the legislation of our country.

Why is it, that sixty-five thousand professional, and one hundred and twenty thousand commercial men, and eight hundred thousand manufacturers and mechanics, making in the aggregate less than one million, exert so much more influence than the four millions of our agricultural population? And why are we told that the farmers constitute so small a proportion of our several legislatures, when their interests are so much greater than that of all other classes united?

The numerical and physical power in this country is largely in favor of agricultdrists, and were their efforts properly directed, there is no reason why the influence they exercise should not be in proportion to this power. The number of farmers to be found in our legislatures at the present time may possibly be greaterthan formerly. Yet it is to be feared, that they are not always the best men who could have been selected; but that in some instances they are those who by their ambition rather than their merits, have gained these places of distinction, and who, if we may form an opinion by the result of their legislation, are controled by others, and in many cases, like some who fill our county and town offices, are men who seek after office, rather than those who are sought after. But my object is not to write a political lecture, but to inquire into the reason why so great disparity exists in the intellectual powers of the different classes of our population. Is it not for want of a system of education adapted to their various occupations. It may be said that the children of almost our entire population enjoy in our common schools equal opportunities for education with each other. Is there not wanting, however, in all of them an appropriateness to some of these occupations, and more particularly to those who seek an agricultural employment? True, in our schools they are taught that "two and two make four:" and that seven per cent added to the principal once in ninety days accumulates rapidly. But is not this suited to the merchant and banker rather than the farmer? Does not this instruction give the commercial man a starting point, which lead him to make laws to promote his own interests, permitting him to purchase State Stocks paying six per cent, and on this basis giving him the privilege of issuing a representative of money upon which he may receive seven per cent once in ninety days on the same property, while the farmer, should he be so prospered as to accummulate a little money to loan, is prohibited by our laws from taking over seven per cent. Should not the farmer's boy be taught that where "one blade of grass now grows two may be made to grow," and should not he be instructed how and in what way this may be accomplished? Thus giving him a starting point, which would be as certain in its ultimate favorable results as in the case just supposed. When will our farmers awake to see the importance of so educating their children to the business of farming, that a farmer's son shall be as well informed in what relates to his occupation, as the commercial and professional man now is in what concerns his? Has not the time arrived when in all our common and higher schools of education and colleges, the science of agriculture should be taught so that they may enjoy equal opportunities for education, adapted to their employment, with the most favored class of our community, and that the education acquired in these schools should not be so exclusively confined to what concerns the professional man alone? Let this subject be constantly kept before the farmer through the agency of agricultural papers and other agricultural publications, and we may look with confidence to the time as not far distant when the farmer, with others, may receive the benefits of education, and legislation, of our common country, when his rights and privileges shall be equally protected, and when education shall make him intellectually strong as well as numerically and physically so. Oneida.

Western Virginia.

Rev. Calvin Hawley, formerly of Otsego county, N. Y., emigrated to Harrisville, Va., last season, and since his residence there, has written an article describing the country, which has been published in the *Freeman's Journal*, Cooperstown, N. Y. We give the following extracts: "It may be proper to remark that the part of the State denominated Western Virginia, lies between the mountains, or Blue Ridge, and the Ohio River, dividing the Commonwealth north and south, and embraces an extent of country some 400 or 500 miles in length, and varying from 300 to 350 miles in width, a large part of which is in a wild state, and little or none of it in what could be called a good state of cultivation. The face of the country is more rough and hilly than any other I ever saw. The hills are not as high as I have seen in other States, but there are more of them, and but little table land on the top. The ridges are very narrow in many places, only wide enough for a road, consequently as soon as you arrive at the summit of a hill you immediately commence descending the opposite side. But the hills are generally free from stone, and the soil rich and productive. The timber is as fine as can be found in any country, and of any quality that can be found in the United States. More of oak than any other kind. Pine, chestnut, hickory, locust, poplar or whitewood, sycamore, beech, maple, black walnut, &c. can be found in great abundance. The trees grow very straight and high, with but few if any low branches. The whole country is well watered by springs and streams that never fail, and have current enough to keep them pure. Such a thing as a swamp or pond of stagnant water can scarcely be found in all the State; consequently there is no country, I believe, more healthy than this, where there are more aged people according to the number of inhabitants. It is common to see persons eighty and even ninety years old riding about on horseback ten or fifteen miles from home on business,—a thing but seldom seen in Otsego county."

"The soil from its appearance would not be considered very productive. It is of a sandy make, mixed with loam and clay, and in some places of a reddish cast; the bottom lands are generally of a darker quality and very productive. There is but little land, however, but what would abundantly reward the hand of culture. This region is well adapted to raising stock. I have never seen so large and healthy looking sheep anywhere as I have seen here, and they require but little if any feeding, still they do better with some attention in this respect. Cattle, horses and swine, do extremely well. All kinds of English grain that is raised at the North will grow here and produce more plentifully. Apples, pears, peaches, plums, cherries, quinces, grapes, melons of all kinds, and wild berries of nearly every specie, grow bountifully and with very little labor. The sweet potatoe grows to perfection.

Guano—Its effect compared with Ashes.

Stephen H. Smith, states to a committee of the Rhode Island Society, for the Encouragement of Domestic Industry, that on one acre of sandy loam, which without manure would have produced twenty bushels of corn, he sowed broadcast, on the furrow, after deep plowing, 500 pounds of best guano, well pulverized, and mixed with four times its bulk of dry loam. After harrowing, it was planted with corn. The product was 50 bushels. In 1845, he seeded down half an acre of ground, a sandy loam, with eight quarts of millet, ten pounds of clover, one peck of herds grass and one peck of red-top seed. This lot was dressed with 350 pounds of guano, worth $9, applied as above described. On an adjoining half acre he put the same kind of seeds and in like quantity. Instead of guano, he applied 64 bushels of unleached ashes, worth $8. The crop of millet was perceptibly best where the guano was used, and about ten days earliest. The crop of grass in 1846 was one-fourth the largest where the ashes were used. In 1847 the clover had nearly disappeared where the guano was applied, but remained well stocked where the ashes were put. The first and second crops this year were decidedly in favor of the ashes.

"The Spirit of Agriculture."

Prof. E. P. Barrows, of the Western Reserve (Ohio) College, in a lecture delivered before the Trumbull County Agricultural Society, speaks in the following eloquent language of the happy results which may follow from the present awakened attention to agriculture:

"We have," he observes, "cheering proofs that the spirit of agriculture is awake. Let this spirit be cultivated, for it has the primitive seal of Heaven upon it. It is the spirit of peace and plenty, and good order, and good morals. It adorns the earth with luxuriant meadows, and goodly orchards, and golden harvests, and pastures covered with flocks and herds. It clusters around itself all the auxiliary arts and occupations, commerce, and trades and manufactures—all nourish it and are nourished by it. It fills the farmer's granaries, and makes his fireside happy and cheerful. While others beat their plough-shares into swords, and engage in the work of desolating the earth, destroying her inhabitants, and filling her with crime and misery, let us have wisdom enough to adhere to the employment of our primeval ancestor—a far nobler employment than that for which his degenerate sons exhibit such a melancholy fondness. In the vast field of agricultural investigation and improvement—a field but hitherto partially explored—let it be our ambition to win laurels not steeped in tears and blood, but gathered in peace and quietness, and bleating flocks, and lowing herds, and waving harvest-fields, and smiling, light-hearted, industrious citizens."

Seedling Potatoes—Running out of Varieties, &c.

In the March number of the Cultivator, I noticed an article from Mr. H. A. Parsons of Buffalo, on the necessity of change of seed, and running out of varieties. On referring back, I perceive that he has written much on the same subject. I do not intend to enter into a controversy with Mr. P., but will submit a few facts and a few practical hints to your readers.

Mr. Parsons says in his premises, that "an occasional instance of success or failure proves nothing." So we all say. He refers to the opinion of Mr. Cooper, who thinks the deterioration of the potatoe is owing in a great measure to the use of *poor seed;* but Mr. P. does not believe that farmers are generally in the practice of using poor seed—that is, small potatoes. If Mr. P. will extend his observations to other parts of the State, I think he will learn that a very large portion of the seed committed to the earth would not make a very good appearance on the table—he would find the tubers generally small and of ill form. Farmers have, in many instances, sold all the good potatoes they could spare, after leaving a supply for their own table. I would ask Mr. Parsons, and every reader of the Cultivator, to inquire of their neighbors, to the number of twenty or more, and see how many are in the habit of selecting the fairest and best shaped potatoes for seed.

"Some varieties having ceased to produce balls," does not frighten me, and is no sufficient cause of alarm. I have dug potatoes, more or less, for thirty years, and have always noticed that where a hill or plant had a profuse crop of balls, the tubers were lacking in size and quantity.

I believe in the principle that like produces like; and if this principle were adhered to, and the best always selected for propagation, we should hear but little about the "running out of varieties."

Mr. Parsons says—"The present disease in the potato was generally first noticed in this country in 1843. Soon after that, (1845), the agricultural census of the State was taken, which showed that the average product of the potato crop was only 70 bushels per acre : not half what it was 25 years ago." It is well known that in 1844 and 1845, the potato crop in this State was much injured by the rot—from one-fourth to nine-tenths of the crop was destroyed by this disease.

He concludes by saying—"I did not intend to make any remarks about the cause or remedy of the present wide-spread disease in the potato." Yet he quotes largely from European authorities to prove that the diseases with which the potato has been attacked, were induced by the age of the varieties and their (supposed) consequent debility. And from his own observation he has drawn the same conclusion—both now and heretofore. He therefore draws conclusions without intending to make any "remarks" in regard to the disease.

In conclusion, I commend Mr. Smith's zeal in the production of new varieties from seed. I say go on, and when varieties are produced which excel those we now have in yield and intrinsic value, let them be adopted; but let all be first *proved*, that we may only "hold fast those which are good." E. Hammond.

Long and Short Manure.

The committee on Farm Management for the N. Y. State Agricultural Society, in their report for 1847, speak of the different modes adopted by the competitors for premiums on farms, and observe—"All the competitors, with the exception of Mr. Delafield, prefer to use manure in its long or unrotted state, while the latter prefers to use it after it is well rotted; a careful examination of the answers, however, reconciles these conflicting opinions. We think that both theory and practice most clearly indicate that a cord of long manure will produce a greater amount of vegetable growth than the same cord would do if allowed to rot, exposed to the action of the sun and rain; because, during the process, a very great proportion of the ammonia will evaporate, and a smaller proportion of the saline matters will be leached away; but this loss will be avoided by the covering of muck, earth and plaster by which the heaps of Mr. Delafield are protected, and which absorb and combine with these valuable adjuncts to fertility. By Mr. Delafield's method, therefore, a greater amount of fertilizing matter is restored to the soil than existed in its unrotted state; but it also has the additional advantage of being presented to the growing crops in a form better fitted for assimilation."

Hints for Preventing Consumption.

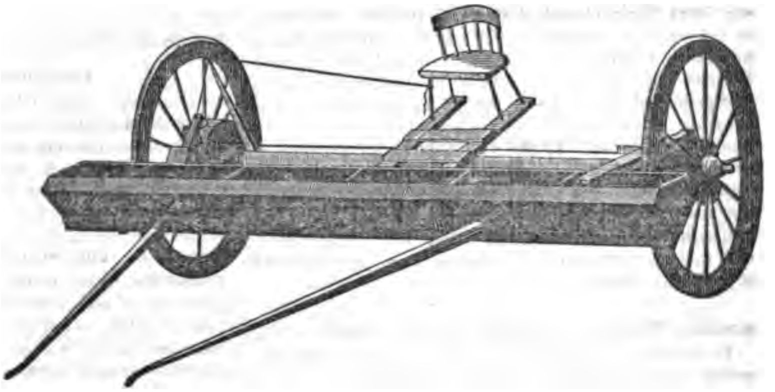
It is not intended to give a chapter on the cure of the dire disease, consumption, believing that a few words on its prevention will be more useful. To insure success, we must begin with the infant subject—the offspring of healthy ancestors. Protect it in infancy with soft flannels next the skin, and let it breathe only pure air. In youth teach it that good health is the greatest of earthly blessings; without it there can be no enjoyment of life, and with it there should be no complaint of its defects. Teach it, that good health like a good estate, may be squandered little by little until it is bankrupt. Teach it that temperance in *all things* is essential; that there can be no violation of the laws of nature with impunity. Teach it to sit and walk erect, that the chest may be fully expanded, to protect the chest with flannel next the person, and other warm loose woolen clothing, at least during that season of the year that easterly or northeasterly winds prevail. Do not suffer the clothing so tight on the chest or body as to interfere in the smallest degree with the free expansion of the lungs. To keep the feet dry with thick oiled leather, loosely applied. Exercise several hours every day in the open air. Choose virtuous and cheerful companions, with whom singing and laughter may be indulged in; and finally, take time to eat and masticate your food well.

The above remarks are hastily thrown together, they are the result of observation and experience, and touch some points that are essential to the preservation of health, and too often neglected in the popular education of youth, or the practice of manhood. A. B. *Setzler's Store, Pa.*

Fastening Shingles.

In one of your back volumes I noticed something in regard to the manner in which shingles are nailed on, in some parts of the country, (I forget where;) but I think the practice of our carpenters is preferable; which is only to nail them in the *waist* or near the middle, so that none of the nail heads, except on the bottom and top courses, are exposed to the sun. It was found that in the old practice of nailing in the buts, the action of the sun would in time loosen the nails and admit the rain. P. S. Bunting. *Crosswicks, N. J., March* 14, 1848.

Seymour's Machine.



Seymour's Broadcast Sowing Machine.—Fig. 49.

The annexed cut represents Seymour's sowing machine, advertised in our last. It has been pretty extensively used in Western New-York, and is much approved. We saw many acres of various kinds of grain on the farm of John Delafield, Esq., near Geneva, last season, which had been sown with this machine, and we never saw grain stand more evenly on the ground. Mr. D. assured us that he could sow anything,—lime, plaster, poudrette, guano, &c. or any seeds, from grass seed to peas or Indian corn, with perfect exactness, graduating the quantity per acre to a pint. It is manufactured bj P. Seymour, East Bloomfield, Ontario county, N. Y.—Price $45.

Horses for "all work."

I notice articles in the Cultivator in reference to horses for all work. If farmers want horses of this kind, let them get the Cleveland bay, from Yorkshire, England. They are invariably of a bay color, with black legs, mane and tail. They are used for all work except the race course. They are from 15 to 16½ hands high, and weigh from 1000 to 1300 pounds each, with bone and sinew in proportion. They are easily kept in condition, inclining to be fat. They have good temper and good action as walkers, trotters, and slow gallopers. They are used in England for carriages, artillery, heavy carting, and even for hunting, with heavy weights. I think the most suitable horse farmers could breed would be Cleveland bays, 15½ hands high, weighing eleven hundred pounds. J. H. Reid.

Frederickton, New-Brunswick, March, 1848.

Experiment in sowing Wheat.

At the winter meeting of the Yates County Agricultural Society, January, 1828, the following account of an experiment tried by me for the purpose of ascertaining the proper quantity of seed wheat for one acre of land was read; for which the Society gave a premium, and voted unanimously to have it published in the Cultivator and Genesee Farmer :

On the 23d of September, 1846, I sowed four plats of ground with wheat, on a summer-fallow that had been plowed five times during the summer. The ground was prepared in the following manner : After the soil had been finely pulverized with a hoe and rake, I measure off accurately four sections each two feet square, leaving a small space between each of about six inches. The squares were then numbered and subdivided as follows ; No. 1 in squares 1½ inches each way ; No. 2 in squares of 3 inches ; No. 3 in those of four inches ; and No. 4 in squares of 4 4-5 inches, including the outside lines of each large square. I then, with the thumb and finger, carefully planted one kernel of wheat in the corner of each small square.

The yield was as follows;

On the 19th of July last, I carefully gathered the four parcels, keeping each by itself—shelled each by hand and counted the grains of each section separately. The results of which are given in the following table: On the 17th of August, I had 4 ounces of the wheat carefully weighed by sealed scales ; and by counting all the grains weighed, I found there were 780 grains in one ounce ; from which I have made an estimate of the different yields, and also the rate of the different amounts of seed per acre, for which see the following table :

No. 1	No. 2	No. 3.	No, 4.	
289	81	49	36	No. of grains planted.
203	60	40	30	No. of grain that grew.
286	136	112	104	No. of heads produced,
26	35	39	42	Av.no. of grs. per head.
7458	4765	4452	4399	Whole number of grains.
108	69	64	63	Yield per acre in bushels.
B. lb 4 12	B. lb. 1 10	.lb. 42¾	lbs. 31½	Amount of seed per acre in bushels and pounds.

It may bo proper to add, that the soil was a clayey loam, which had never been manured and had been kept for pasture during the preceding six years. Should the ground be well prepared and sowed with a drill, it is probable, from the foregoing experiment, that the yield would be greater than if sowed broadcast.

Milo, Yates Co. N. Y. Jan. 1848. A. C.

Statistics of Lowell.

Messrs Edits.—From the statistics of Lowell collected in January last, we learn that the number of incorporated manufacturing establishments in the place at that time, was twelve. Capital invested in them $12,110,000. Number of mills 47. Number of spindles 301,297. do. of looms, 8749; number of females employed, 8,635; do. males do., 3,995. Number of yards made per week, of cotton, 1,920,900; woolen, 21,291; carpeting, 6,500; rugs, 40. The number of pounds of cotton consumed per week is 637,000; do. of wool, 46,000; yards of printed goods 380,000; of dyed do., 1,235,000. Twenty-five thousand four hundred tons of anthracite coal are used per annum in these establishments, and of charcoal 36,303 bushels. They also consume 77,810 gallons of oil, and 35,000 of lard in the same time, together with 1,190,000 pounds of starch and 765 barrels of flour. Eleven of the establishments are warmed by steam, and one by steam and furnace. The average wages of females per week, clear of board, is two dollars; of males per day, clear of board, eighty cents.

The Middlesex Company makes use annually of 6,000,000 teasels, 1,716,000 lbs. of fine wool, 80,000 pounds of glue, $60,000 worth of dye stuffs, and $17,000 worth of soap.

There is a hospital for the benefit of the operatives, under the care of an able physician; two savings banks; three banks, to wit: The *Lowell*, with a capital of $200,000; *Railroad*, capital $600,000; *Appleton*, capital $100,000; a mutual insurance company; a library of 7000 volumes belonging to the city, the benefits of which are open to all on the payment of fifty cents a year.

Other manufactures produced in the city, aside from those above cited, and the machine shop turns out products to the value of $1,000,000, employing capital to the amount of $350,000, and about 1,200 hands.

The population of Lowell in 1820 was about 200; in 1846, 28,841; in 1848, estimated 35,000.

Preservation of Manure.

S. A. Law, Esq., in his address before the Delaware county, (N. Y.) Agricultural Society, makes the following sensible remarks in regard to the preservation of manures.

"While the full value of manures is admitted, how few farmers have their yards so constructed as to prepare and reserve the greatest amount of fertilizing compost. Instead of barn and stable yards made lowest in the middle to retain those liquids which chemical analysis and actual experience have shown to be more valuable, and to contain in a more concentrated form, the elements of vegetation than solid manure, most farm yards are on sloping ground, as if constructed purposely for waste—and not unfrequently with a rivulet near by, to carry away all that may wash into it; instead of yards, in the fall of the year, filled with compost from the swamp, or from ditches, to be converted into manure, we see them empty, and usually provided with a ditch to carry off all moisture. Farmers who mean to be economical—who indulge in no unnecessary expense—and who would hesitate to spend a shilling for the gratification of a depraved appetite, by such practices as I have referred to, throw away dollars. Swamp mud, turf, leaves, weeds, and in fine, all the refuse of a farm, useless as manure in a natural state, when placed in the barn-yard or pig-sty, and thoroughly incorporated with materials there, becomes the best of manure, amply repaying the farmer for the time spent in collecting them."

Tan-bark for Manure.

I have been in the habit of supplying my hog-pen liberally with tan-bark, which enables the hogs to manufacture a large quantity of manure. The bark absorbs the liquid part, and is also a mechanical benefit in keeping the manure open and loose, as it naturally has a tendency to harden and bake; and if put into the corn-hill without sufficient care in planting, sometimes proves a positive injury. A day or two before using the manure, I incorporate with it ashes and plaster; and by putting this mixture into a hill, I raise corn with good success. E. R. *Hartwick, Otsego Co., March* 12, 1848.

Phosphate of Lime.

This substance constitutes the basis or earth of bones. In some of the dairy districts of Britain, where the land has long been grazed, it is said the phosphates have been exhausted in a great degree, and that the application of bones, or phosphate of lime, as a manure has been found very useful. Plants consume or take up this element in the shape of phosphoric acid. Wheat and other grains require this kind of food. Urine contains it in considerable proportion, and this is considered one cause of the great benefit of this substance as a manure for grain crops.

Phosphate of lime is not common. It has been found in Estremadura, in Spain, in large quantities, and has been carried to England at great expense and applied to the soil as a manure, but with what precise effects we have not learned.

We learn from Dr. Emmons that two localities of phosphate of lime have been found in this State; one near Hoosick-Corners in Rensselaer county, and the other in Warren county. The proportion of phosphoric acid combined with the lime is said to be unusually large in both instances; and the highly productive character of the soils of those localities, especially for wheat, is said to have first attracted attention.

Mr. J. C. Nesbit states in a late number of the *Mark Lane Express*, that being on a visit to a farm near Farnham, his attention was called to a kind of marl, which was said to produce remarkable fertility when applied to the soil. On analysing this marl with great care, he found it to contain from four to five per cent of bone earth.

The Salmon of Oregon.

Lieut. Howison of the U. S. navy, in his report on Oregon, states that the Salmon enter the mouth of the Columbia in May, and make their way up the stream in immense shoals, for the distance of twelve hundred miles, being found in the month of September, at the very sources of the Columbia. The young fry pass out to sea in October, when they are nearly as large as herrings. Different families of salmon resort to different rivers, which empty into the Pacific on the northwest coast. The largest enter the Columbia, coming from the north. They average twenty pounds each, and some weigh forty pounds.

These fish constitute the chief subsistence of many thousand Indians, who reside in the country watered by the Columbia, and its tributaries; and besides affording an abundant supply to all those and the white settlers of Oregon, eight hundred barrels a year are exported.

Lieut. H. remarks that strange as it may appear "none but Indians have ever taken a salmon from the waters of the Columbia; it seems to be conceded to them by an inherent right which no white man has yet encroached on." They are very superstitious respecting this fish. When they first appear they are permitted to pass on for several days unmolested, and for three weeks after their arrival nothing can induce an Indian to sell one. During the whole season, on catching a salmon, they immediately take out its heart and conceal it till they have an opportunity to burn it; their great fear being that this sacred portion may be eaten by dogs, which they shudder to think would prevent the fish from coming in the river any other year.

Potato Disease.

We have received a letter from Mr. J. F. Simonds, of West Poultney, Vt., in which he gives some facts that have led him to the conclusion that a remedy for the potato disease is to be found in using *small potatoes for seed*. We will not venture to say what caused the exemption from rot in the cases he mentions; but if small seed potatoes were any security against the malady, the crops of this vicinity for the last two years ought certainly to have escaped. But the loss by rot has, probably, been as great here as in most sections, notwithstanding a very large proportion of very small potatoes has been used for seed.

But a theory still more novel than the above has been broached, viz., that the disease is attributable to the influence of a *comet!* A year ago, or more, we saw this conjecture put forth in a Massachusetts paper; and lately we noticed that the same idea has been advanced by a correspondent of the *Monthly Visitor*. The writer alluded to thinks "it is possible, and even probable, that the comet which appeared in the month of February, 1843, with such brightness and splendor as to be seen with the naked eye near the sun and about noonday, imparted something to the earth directly or indirectly, which was deleterious to the potato plant."

But admitting the assumption that a poisonous principle was actually imparted to our atmosphere by the comet, it is certainly very singular that the potato of all the productions of the earth, should have been made the special victim!

Of late, we have not thought it an object to occupy much time or space in reference to the potato disease; but having seen in the *Gardener's Chronicle*, an account of a very complete series of experiments tried last year in the garden of the London Horticultural Society, we are disposed to give our readers a brief abstract.

In the experiments alluded to, the soil and seed were treated in various ways, and the proportion of diseased tubers ascertained on digging the crop. The substances employed were lime, charcoal, salt, chloride of lime, potash, fat, sulphuric acid, coal-tar, chalk, sulphate of soda, nitrate of soda, sulphur, and sulphate of magnesia. In some cases these substances were mixed with the earth near the potatoes, and in other cases the sets or tubers were sprinkled with the substances before planting. The various articles were applied not only separately, but mixed in almost every way, and the rows thus treated, carefully compared with each other as to yield and condition, and also with parallel rows which received nothing. Full tables (for which we have not room) are given, showing the results in each particular case. No conclusion could be deduced from either of the trials, or from the whole taken together, in favor of the usefulness of any application or treatment. The *Chronicle* remarks, so capricious was the enemy in its attacks, "that a result obtained in one place was directly reversed by a result in another place only a yard or too off—there being no appreciable difference in soil or situation or circumstance. For example, the percentage of diseased potatoes found where nothing had been used in the soil, was as high as 32.50 and as low as 5.74. And although in the cases of some applications no disease whatever was found when the crop was taken up—nevertheless, in many instances the very same applications were found connected with above 50 per cent. of disease."

In connexion with the above, experiments were tried with seedling potatoes, and also with wild ones from South America. The seedlings were from seed obtained from various parts of Germany, from Poland, and from some districts of England. Some of the plants were started in hot-beds and afterwards transplanted to open ground, and others were grown entirely without protection. The tables show that all these suffered as badly as other varieties. The account says—"seedlings, concerning which so much obviously unfounded expectation was entertained, proved no more exempt from the disease than old and long cultivated varieties."

The wild potato fared no better. We are told—"A perfectly wild form of the root, fresh from its native mountains, exhibited the characteristic blotches in a worse degree than any other sort in the garden."

Farming on Thirty-seven Acres.

In our last volume, (page 180), we gave an article being the substance of a statement of J. G. Chadsey to the officers of the Rhode Island Society for the Encouragement of Domestic Industry. From the report of the doings of the Society for the year 1847, we notice that Mr. Chadsey's farming still continues profitable. He observes—"As my farm has been more productive the present than any former year, I will briefly state the net proceeds of my crops, so far as ascertained. My mode of cultivation has been the same as before communicated to the Society, and shall, therefore, omit particulars, in order to avoid a repetition of my last year's statement. I have cultivated about two acres more than last year, and increased my farm expenses very considerably, mostly for labor, which have been met with more than a corresponding increase of products. I have already (Dec., 1847) sold $842.43 worth, and estimating the balance at the same rate, my crops the present year will amount to $1410 60

Expenses, viz: for labor, board, manure, farming utensils, &c.	564 69
For the use of my farm of 37 acres,	$845 91

Curing Corn.

I last year cut up a portion of my corn and cured it "Yankee fashion." I succeeded well, not losing an ear in a hundred bushels. The fodder was the best I have ever seen. It was cut part in September and part October. I am determined to save my corn fodder that way hereafter for many reasons: 1. The corn is as good if not better than by the old way of gathering. 2. The fodder is greatly superior. 3. The field is cleaned by the operation, and with the help of a cutting-box, the stalk is returned in manure, much more advantageously to the land. 4. Our way here, required walking over a field six times to gather fodder and corn, whilst this requires but three times. S. M. Hyams. *Nachitoches, April*, 1848.

Answers to Inquiries.

"Family Bolter."—Jethro, Reclusa, Georgia. Fitzgerald's mill has a portable bolter which may be attached to it, and will make the finest of flour from any kind of grain. The bolter may be had at the Albany Agricultural Warehouse—price $40.

"Cabbages turning to Turnips."—C. N. B., Orient, L. I. The cause of cabbages turning to turneps is, probably the mixture of the two species while in blossom. The whole of this tribe (*brassica*) will mix in this way, and they should on this account be kept at a distance from each other when put out for seed.

Fish manure for Onions.—C. N. B. We have never tried fish manure for this purpose, but should suppose a compost made with fish and well worked over, would answer well.

Nitrate of Soda.—S. J. W. The South American article could be had in New York for about five cents per pound, by the quantity. Its value as manure as indicated by experiments, has been various. Its effects are generally more obvious in the growth of straw than in grain.

R. R., Fayetteville, N. C.—We sowed a part of the same lot of Osage Orange seed, and we should think nearly every seed vegetated. Yours may come up this spring.

Steel Cultivator Teeth..—T. B. Alabama. The price of Rogers' improved Cultivator teeth is 50 cents each, by the quantity, or 62½ cents single. They weigh three pounds each.

Fattening Sheep in Winter.—E. F., Forkston, Pa. The quantity of grain fed to sheep per head, daily, varies with the kind. Of Indian corn, from two gills to a pint, and in some cases a quart, are the quantities usually given. It is customary with the best feeders to give some potatoes and other vegetables in connection with the grain.

Churning by Water-power.—E. F. A discharge of five gallons of water per minute, with eight feet fall, would probably work an overshot wheel, by which the "milk and cream of a dozen cows" might be churned.

American Pippin.—E. F. The apple described under this name by Downing, is not identical with the Newtown pippin, though he mentions that the latter is frequently called by this name abroad. The American pippin is called in some sections the *Grindstone*. It is chiefly valuable for late-keeping. It is of a dull red color, with star-like russet specks. Its form is roundish, somewhat flattened; keeps till June.

Notices of New Publications.

The Horticulturist and Journal of Rural Art and Rural Taste. Edited by A. J. Downing, author of "Landscape Gardening," "Fruits and Fruit trees of America," and other works.

The third volume of this periodical will commence in July. Under the judicious supervision of Mr. Downing it has attained a character and reputation not inferior, we are safe in saying, to any similar work in existence. The second volume, which is completed with the No. for the present month, forms a beautiful and valuable book, embracing a great amount of practical informationon the subjects of horticulture, pomology, landscape gardening, botany, rural architecture, entomology, and rural economy generally. Each volume contains twelve plates—one to each number—and there are besides more than one hundred other engravings of buildings, trees, plants, &c. The number of communications to the last volume is large, and they are from the most eminent and successful horticulturists in all sections of this country. We are gratified that it receives a substantial patronage, which ensures its continuance. It is published at this office, by the proprietor of the Cultivator, terms, $3 a year. Each number contains 48 pages—printed on fine paper, and executed in a style equal in every respect to the best periodicals of the country.

New Edition of Webster's Dictionary.—The new edition of this work lately issued by Messrs. G. & C. Merriam, of Springfield, Mass., is "got up" in beautiful style. It comprises in one quarto volume the entire dictionary of Webster which had formerly been published in two volumes, and it is sold at the very low price of *six dollars*—a cheaper work in proportion to its value and style than we have known offered.

Of the value of this work as a dictionary of the English language, it is unnecessary for us to speak—it is acknowledged to be unequalled, and is the only work which should be used as a standard in this country. The present edition has been executed under the supervision of Professor Chauncey A. Goodrich, of Yale College.

The Farmers' Library and Monthly Journal of Agriculture. This publication is now nearly at the close of the third volume. The May number completes the republication of the "Book of the Farm," a standard and elaborate Scotch work. The department devoted to a "Monthly Journal of Agriculture," opens for May with a fine portrait on steel, of Marshall P. Wilder, Esq., President of the Massachusetts Horticultural Society, one of the most zealous and spirited Horticulturists in the country. The plate is accompanied by a well-written memoir of Col. Wilder, by the editor of the "Library."

This work continues to be under the supervision of J. S. Skinner, Esq., one of the fathers of agricultural literature in America. It is published by Messrs. Greely and McElrath, who have evinced much enterprize and liberality in its neat execution, and numerous illustrations. Terms, *Five Dollars* a year.

Silliman's Journal of Science and Arts.—The number for May contains its customary variety of useful articles, among which we notice a Review of the Annual Report on the U. S. Coast Survey, an article on the Theories of Electrical Phenomena, with various valuable matters under the head of Scientific Intelligence. Edited by Messrs. Silliman and Dana; published at New-Haven, on the first of every second month—$5 a year.

Ewbank's Hydraulics and Mechanics.—Part vii of this work, describes the first steam engines, which ends the fourth book of the series. Book v opens with "novel devices for raising water, with an account of siphons, cocks, valves, &c. &c." The subject of raising water by machinery is lately attracting much attention, and those interested in the matter would do well to purchase this interesting work. Republished by Greely and McElrath, New-York, in numbers, 25 cents.

New-York State Ag. Society.

The Executive Committee met at the Society's room, Albany, May 1, and 12. The several committees for awarding premiums at the next fair, were appointed. The names will be announced in due season.

The time of holding the Fair was fixed for the *5th, 6th and 7th* of September next, instead of the 12th, 13th and 14th of that month, as had been previously appointed.

Visit of Prof. Johnston to the United States.—It having been suggested that Prof. Jas. F. W. Johnston, of Edinburgh, might be induced to visit this country, the secretary was authorized to open a correspondence with other societies in relation to engaging the Professor to lecture on Chemistry and other sciences connected with Agriculture, and an appropriation was made on the part of the Society towards defraying the expenses. It is to be hoped that other societies will come into this measure, and that sufficient funds to accomplish the object will be received.

Stafford's Patent Dryer and Cooler.—Mr. J. R. Stafford, of Cleveland, Ohio, exhibited a sample of Indian meal which had been prepared by his apparatus fifteen months. It was as perfectly sweet as the freshest and best meal. It had been kept in a common barrel. Mr. S.'s invention appears to be of great value and accomplishes an object which has long been sought. It dries meal and grain by steam. The apparatus consists of a cylinder made of sheet-iron, with flanges arranged on its outer surface. The inside of the cylinder, heated with steam, is made to revolve, carrying round with it the grain or meal, which is thus completely dried without the possibility of being scorched. Samples of meal, flour and grain thus prepared may be seen at the Society's rooms. On motion of Mr. Peters, the following resolution was adopted:

Resolved, That we consider the Steam Drying apparatus of Mr. Stafford, for the preservation of bread stuffs from souring or heating, a most valuable invention, and one deserving of extensive encouragement, and that we deem it important that the government of the United States should adopt measures to test the qualities of the flour and meal, by sending quantities of it in our public vessels on long voyages in warm climates, and in such other manner as will be best calculated fully to test its preserving qualities.

Address of Prof. J. P. Norton, before the N. Y. State Ag. Society.—The *Pairie Farmer* thus appropriately notices this address:—"We find it characterized throughout by the author's usual clearness and simplicity of style, and by his freedom from cant and humbug. Professor Norton is, to our apprehension, the best of all the scientific writers on agriculture in our country. He recognizes fully the dependence of theory on experiment, as its test, and considers no theory of value any farther than it is borne out by experiment. His addresses are calculated to make plain to the common understanding, matters which in most hands are wrapped up in impenetrable fog; and it is this practical apprehension which gives him his superiority. The address before us will be read with profit by every intelligent man, whether indoctrinated in scientific lore or not; and we hope it may find general circulation.

☞ We invite attention to the advertisement of Mr. J. B. Dorsey. We are informed that the property he offers for sale is of a very desirable character. The James River and Kanawha canal passes through it, and it has a market at hand for all kinds of meats, fowls, butter, milk, vegetables, &c.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications received during the last month, as follows:—H. H. Ingalsbe, A. B. McClean, R. Watkins, C. N. B., F. Roys, J. M. Hyams, A Subscriber, Jethro, P., F. Holbrook, D. Thomas, M. W. Philips.

Books, Pamphlets, &c., have been received as follows: Public Documents from Hon. J. I. Slingerland—The Grandeur of Nations, an Oration, by Charles Sumner, Boston, for publisher. T. B. Peterson, Philadelphia—To — for Premium List, &c. of Yates. Co. Ag. Society.

Winter Grain.—The prospect for winter wheat, from what we learn, is favorable to a good crop. Rye, in this vicinity, was somewhat winter-killed, but we understand the late rains and favorable weather have improved its appearance.

Fruits.—Peaches were killed in the bud by the extreme cold of the 11th of January last. There have been no blossoms in this vicinity. Plums gave but few blossoms, and cherries rather a small show. Was cold the cause of the failure in the two latter fruits? Apples blossomed well, and pears made an unusual display, and the fruit appears well set

Good crop of Wheat.—Mr. R. J. Livingston, of New-Brunswick, N. J., informs us that he raised last year from 8 22-100 acres, 272 bushels of R. Harmon Jr's. improved white flint wheat. Five years ago, he states, his neighbors told him nothing could be made to grow on the lot. The means used to produce the wheat were, "the subsoil plow, clover, muck and ashes."

Sale of Short-Horned Cattle and Merino Rams.—It will be seen by Col. Sherwood's advertisement that he proposes to sell a number of his cattle and sheep at the State Fair at Buffalo. In order to afford facilities for those wishing to sell or purchase stock, the officers of the State S. have decided to keep a register of such animals as may be offered for sale at the time of the Fair. This will be a matter of great convenience. In reference to Col. Sherwood's stock, we have before remarked that it has been bred with great care, and in blood and qualities will compare favorably with the best herds in the country.

Kinderhook Wool Depot.—We invite attention to Mr. Blanchard's advertisement of this wool depot. This is the third year the establishment has been in operation, and we believe it has given entire satisfaction to all who have been connected with it in business transactions.

Premium Crops of Ontario County, N. Y.—The Agricultural Society of this county awarded premiums for the following crops, grown in 1847. *Wheat*—61 bushels produced on one acre and forty-two rods—equal to 48 bushels and 18 pounds per acre—crop grown by Uri Beach, of East Bloomfield. *Indian Corn*—88 bushels per acre—crop grown by Geo. Rice. of East Bloomfield. *Barley*—55 bushels per acre—grown by Bani Bradley, East Bloomfield. *Oats*—70 bushels per acre—grown by Bani Bradley.

The Horse Gifford Morgan.—We invite attention to the advertisement of this horse in the present number. We are informed by those who have lately seen him, that he was never in better condition, and that he still shows all that animation and vigorous action for which he has been distinguished.

Great Trotting.—An American bred horse called *Blunderbuss*, aged twenty years, lately performed in England fifteen miles in forty-eight minutes and six seconds. His antagonist was seven years old—the old horse won by a quarter of a mile. The said match was made in harness, and the roads were in rather rough condition.

Black Hawk.—By an advertisement in our last, it will be seen that this justly esteemed horse of the Morgan stock will be kept at the stable of Messrs. Hill in Bridport, Vermont, the present season. We believe the popularity of this valuable animal continues undiminished.

Correction.—In Mr. Holbrook's article in our last, fourth line from the bottom of the first column, for "where the frost is three or four inches deep," read when the frost is out three or four inches deep.

The Taintor Importation of Merinos.—Mr. A. L. Bingham, of Cornwall, Vt. writes that the lambs from rams of this stock with ewes of his old flock, "make the most splendid cross" he "ever made."

A good use for Bayonets.—John Q. Wilson, Esq, of this city, has called our attention to a very neat and handy onion-hoe made from a bayonet. A quantity of bayonets having been damaged by fire, Mr. W. suggested that they might be profitably worked up into tools of this description. The socket admits the handle, and about eight inches of the bayonet, curved to the requisite angle, forms the blade of the hoe, which being of steel carries a sharp edge, and in proper hands is *death* on weeds.

Draining—At a late discussion of the subject of draining, at a meeting of a farmer's club in England, it was unanimously admitted that draining should at all times be followed by subsoil plowing, as affording a more ready percolation to rain-water, by which the fertilizing properties of manure in the soil are more effectually held in solution and conveyed to the roots of the growing crop. It was agreed that the best system of draining is by pipes and stones; that no fixed rule as to depth can be followed, as that depends in a great measure on the situation of the land and the nature of the soil and subsoil; but that in all cases the drains should be, when covered, below the reach of the plow.

Wayne County, Michigan.—Mr. Chas. Betts. of Redford, Mich., writes: "The capabilities of this county are barely beginning to be developed. Science is gradually working its way into the humble dwellings of the farmers of Michigan. Her potent energies will convert the yellow barrens into blooming fields. A thorough system of draining must be adopted throughout the entire county. There never was a place where a thorough knowledge of the principles of draining and their practical utility, are more absolutely needed than here."

Use of Ether in Animal Surgery.—The English papers speak of the use of this substance by veterinary surgeons in performing surgical operations on horses and dogs. The animals are made entirely insensible to pain by the inhalation of the vapor, and the operations are performed with much more facility and accuracy than in the ordinary way.

Value of Corn-Cobs.—We have frequently spoken of the value of grinding corn with the cobs for feeding cattle and horses. When cattle are fed a large quantity of meal, it is not easily digested, owing to its lying too closely together in the stomach. The gastric juice does not easily penetrate the mass. The principal advantage of the cob, we suppose to be that it renders the meal lighter, and enables the digestive organs more easily to manage it. Still we have no doubt that there is some *nutriment* in cobs. We remember an account well authenticated, of a woman in Maryland who in a season of great scarcity for hay and other cattle-food, begged the corn-cobs from her neighbors, which she boiled and gave to her cow. She wintered the cow in this way, and brought her out in better condition in spring than most of the stock in the neighborhood. We have known of other instances which showed that the cob was capable of affording support to animals.

But a *radical* kind of writer in a late number of the *Genesee Farmer*, states that he fed cattle and horses on corn and cob meal, and that it *injured* them! And in order to show his opinion of the worthlessness of this food, he recommends that "crushed flints and ground glass" be used instead of cobs.

A counterpart to this is given in the address of W. H. Lamport before the Ontario County Agricultural Society: He says—"Cob meal makes a good feed for cattle, horses or hogs. A friend of mine in Yates county, informed me, he wintered a span of farm horses and kept them in good healthy condition with ground cobs. His course was to thresh off the corn leaving from one to two quarts of corn to the bushel of cobs; which being ground fine, he fed them freely, but with nothing else save dry barley straw."

This is giving rather more value to cobs than we are disposed to allow, but we are confident it is better to grind them with the corn than to feed stock with meal from corn only,—especially when a considerable quantity of meal is to be given.

Preserving Fruit.—In the first number of the Transactions of the Massachusetts Horticultural Society, there is an account of a new mode of preserving apples and pears. The inventor of the mode, M. Paquet, of Paris, has received from the Royal Society of Horticulture a medal. He presented on the 12th of June one hundred pears and apples, which it is stated had not only preserved their beauty, freshness and flavor, but even their perfume. His fruit-house is described as a circular building, with an outer and an inner wall—the size of the building being whatever is convenient. The distance between the outer and inner wall is about three feet six inches. There are windows in both walls, a diffused light being preferred to darkness. The inner room, which is the depository of the fruit, is kept at a constant temperature of about 50 degrees (Fahr.); as low as 39 would not be injurious, but 66 to 73 destructive." Boxes are made with drawers of oak; that wood being easier to be cleaned from the remains of fruit which might decay. "In these drawers," says the account, "the fruits are placed with small intervals between each, on a slight bed, one-sixth of an inch thick, of saw-dust, (not pine, which would communicate an unpleasant flavor,) highly dried in an oven, eight parts, and one part of very dry pulverized charcoal; and with this mixture the interstices between the fruits are filled to about two-thirds of their height, leaving one-third exposed." This mode is deemed greatly preferable to keeping fruits in moss, cotton, paper, or other substances.

The fruit should be gathered with the greatest care, and not in the least bruised; the fairest and finest specimens selected. It should be gathered ten days before it is ripe. After it is gathered, it is directed to leave it in an open airy situation for about fifteen days, to sweat, and on no account be wiped previous to being deposited in the fruit-house.

Transplanting Evergreens.—It seems to be well established that June is the best month to transplant evergreens in this latitude. We know of several trials with white pines in this month which have succeeded better than any we have known transplanted earlier. They require, as well as all resinous trees, great care in taking up, being much more injured in cutting the roots than hard-wood trees. As much earth as practicable should be left round the roots, and they should not be suffered to dry before they are again put in the ground.

Benefit of Toads.—These animals are very useful in gardens. They live entirely on insects, which they devour without much regard to the species—the selections being made by toads of different sizes, according to the bulk they are able to swallow. While the toad is small he is only able to feed on gnats, small flies, the smallest beetles, &c.; but when full grown he will swallow almost all insects that infest the garden or field, whether in the larva or perfect state. The number of insects which they are capable of devouring is surprising to one unacquainted with their habits. Several years since the writer ascertained that a large toad, which he kept confined for the purpose of experiments, would devour from eight to twelve grubs, the larvæ of the May-bug or cockchafer, (*Melalontha vulgaris*) per day. There is another advantage which they have over fowls, in gardens—they will do no injury to any plants, their mode of taking the insects being such that the plant is scarcely touched in the act. A few boards should be laid round the garden, raised about an inch from the surface, under which the toads will take shelter in the day-time, as they only feed during the night.

Usefulness of Birds.—Few persons appear to be aware of the immense number of insects destroyed by birds. Different species of birds prey on different kinds of insects, or take the same kinds of insects in different stages. Thus swallows, martins, &c. take their food in the air, and catch insects while in the perfect or winged state. They hover much near water, and devour myriads of those insects which live in that element in their first stages. The common apple tree caterpillar is eaten by few birds, but to the cuckoo it seems to be the natural food. One of these birds will in a short time destroy a nest of these injurious pests. They tear open the web with their bills, and besides gorging their craws with the worms, will kill many which they cannot swallow. Robins take their food mostly from the ground—taking such worms as attack grain, grass and garden vegetables. They also eat angle-worms and beetles.

Many kinds of birds may be induced to take up their abode near the habitations of men. They seem to have an instinctive idea that man is (or ought to be) their protector. If they find themselves unmolested, they evidently enjoy a close proximity to the "lords of the creation," and they evince their happiness by their sportive actions and sprightly songs.

To Destroy Cockroaches.—A correspondent of the *Horticulturist* recommends the following, which the editor says he has tried and found "perfectly effectual."

Add about a teaspoonful of powdered arsenic to about a table-spoonful of mashed boiled potatoes; rub and mix them well together, and then crumble about a third of it, every night at bed time, about the kitchen hearth; it will be eaten up or nearly so, by the following morning. The creature is very fond of potatoes, and devouring them greedily, crawls again into its hole and perishes. I had occasion to have some alterations made in the kitchen stove six months after I pursued this plan, and found hundreds of wings and dried mummies of defunct cockroaches. Their disappearance was not attended with the slighest perceptible smell; and though five years have elapsed, not one has again been seen in my kitchen. In putting it into prrotice, any remaining crumbs should be swept up the next morning.

Maccaroni.—This article is said to be made from wheat of the finest quality, which after having been threshed, is spread upon the flat roofs of houses during the hot weather, and there left exposed to the sun during the day, and to the dews of the evening and morning for a fortnight or three weeks, till it becomes quite hard and dry.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, May 18, 1848.

FLOUR—Genesee per bbl. $6a$6.25—Oswego $6a$6.12½.

GRAIN.—Wheat, Genesee, per bu., $1.37a-140—Corn, northern, 57a58c.—Rye, 72a73c.—Barley 80c.—Oats, 46a48c.

BUTTER—Orange County, per lb., 20a21c.--Western, dairy, 16a17 c.

CHEESE—per lb., 7a8c.

COTTON—Upland and Florida, per lb., 5a7c.—New Orleans and Alabama, 5¼a7¾c.

BEEF—Mess, per bbl., $8.62½a$9.11½—Prime $5.50a$6.

PORK—Mess, per bbl., $10.69—Prime, $8.25.

HAMS—Smoked Western, per lb., 6¼c.

LARD—in kegs, per lb., 5½a6¾c.

HEMP—Russia clean, per ton, $230.—American dew-rotted, $130a$135.

HOPS—First sort, per lb., 5a6½c.

TOBACCO—Virginia. per lb., 3½a7c.

WOOL—(Boston prices.) May 18.

Prime or Saxon fleeces, washed per lb........	45a50	cts.
American full blood fleeces,..................	40a45	"
" half blood do	35a38	"
" one-fourth blood and common,.....	28a30	"

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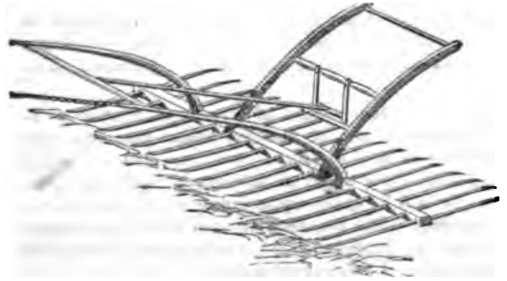

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On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles a small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

P. S Fluid Cataracts removed without an operation.

April 1—4t.

WATER PIPES FOR HYDRANTS, PUMPS, &c.,

Of	[illegible]	in. calibre, and	wg. from	1 lb.	8 oz.	to 3 lbs.	8 oz.	per yd.
"	[illegible]	do	do	1	14	6	6	do
"	[illegible]	do	do	2	8	8	4	do
"	[illegible]	do	do	3	8	10	8	do
"	1	do	do	5	10	14		do
"	1¼	do	do	6	12	17	8	do
"	1½	do	do	11		19		do
"	2	do	do	16	12	27		do
"	2½	do	do	23	8	50		do
"	3	do	do	28		59		do
"	3½	do	do	45		80		do
"	4	do	do	49		90		do
"	4	do	do	waste pipe.		15	14	do
"	4½	do	do	do		17	4	do
"	5	do	do	do		34		do

Prices of the above pipe 6 cents per lb. A. B. ALLEN & Co.,
May 1—2t, 189 & 191 Water-street, New-York

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,

May 1, 1848—6t. Cabotville, Mass.

NORMAN or MORSE'S GRAY.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15½ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500. The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner, Mr Morse *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I. T. GRANT P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

PITT'S DOUBLE PINION HORSE POWER, SEPARATOR, AND CORN AND COB MILL.

I hereby give notice that I am now making a large number of the above machines, which I offer to those who wish to purchase as superior to any machine of the kind now in use.

For the information of those who are unacquainted with my Separator, I will say it threshes and cleans from three to five hundred bushels of wheat per day, and from six hundred to one thousand bushels of oats, and other grain in proportion.

The machine has proved itself superior to all others for the purpose designed.

It has been exhibited in various parts of the United States at State Agricultural Fairs, also in Canada, and has always taken the *First Premium*.

My Double Pinion Horse Power has been in operation in Western New-York and Ohio for several years past, and is now admitted wherever it is known, for ease, convenience, strength, durability and cheapness of repair, to surpass any other Horse Power.

The Power is so constructed as to entirely obviate the danger and inconvenience of the large spur wheel, so objectionable in other Powers. It may be used to as good advantage with two horses as any two horse power, and is sufficiently strong and durable for eight horses.

Price of Separator one hundred and fifty dollars.

do Horse Power and Separator complete, two hundred and fifty dollars.

Five per cent. deducted for *cash*.

The Corn and Cob Mill I have enlarged to about double its original capacity. the teeth have been rendered more durable, which, together with other improvements has greatly increased its value. It is furnished with a hopper to feed loose grain, and a tube to feed corn in the ear.

The Mill gives general satisfaction, is durable, easily kept in order, and for the use intended is acknowledged superior to any other mill.

Price Fifty Dollars. JOHN A PITTS,
May 1, 1848. Rochester, Monroe Co., N. Y.

FARM IN MICHIGAN FOR SALE.

I HAVE a good improved farm of 145 acres. three miles from the village of Ann Arbor, for sale. Price $2200. Also 37 acres improved land one-half mile from said village—price $1200. Also 20 acres one and a half miles distant, for $500. Emigrants will do well to give me a call. WM. S. MAYNARD,

May 1. 1848—2t. Ann Arbor, Michigan.

VALUABLE BOOKS

For sale at the Office of the Cultivator:

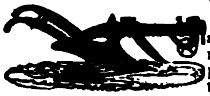
IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

THE EAGLE PLOW.



PROBABLY no Plow has been so long before the public with so few alterations, come into so general use, or received so many, and of so high grade premiums, as the Eagle Plows, from the establishment of Messrs. Ruggles, Nourse and Mason.

Notwithstanding the great diversity of soils, modes of culture, and the increasing competition of many distinguished manufacturers, and year after year having been subjected to the most systematic, persevering and thorough trials ever had in this country, it still stands at the head of the list for excellence of work, materials, workmanship, durability and price.

By referring to the advertisement of the manufacturers in this and the last number of the Cultivator, will be seen the high estimation put upon them by committees and plowmen, as well as their very general use where they have become known.

It is but just here to state, that in the most important trials in New England, the plowmen are required to use the same plows and teams which have been used on their farms, not less than sixty days previous to the trials. The owners are required to hold their own plows, to perform a certain amount of work, usually one-eighth of an acre of a given width and depth of furrows, in a given time. All of which rules and regulations are made known months before-hand, thus avoiding very many difficulties which often arise in deciding who really merit the awards and premiums.

A full and complete assortment constantly on hand and for sale at *manufacturer's home prices at wholesale and retail*, at the Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, by

April 1. H. L. EMERY.

---

183 FRONT-STREET, NEW-YORK.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of Agricultural Implements of the latest and most approved patterns.

Plows adapted to every description of soil, embracing a greater variety of patterns than can be found in any other establishment in the United States.

Moore's highest premium Plows.
Freeborn & Hitchcock's do.
Minor, Horton & Co's do.
Ruggles, Nourse & Mason's do.
Prouty & Mear's do.
Subsoil do.

Two and Three Furrow Plows.
Side Hill and Double Mold do.
Cultivators with Steel and Cast Teeth.
Harrows, plain and double hinged
Garden & Canal Wheelbarrows.

Single and Double Corn Shellers, price $5 to $10.

Straw Cutters, Greene's, Steven's, Sinclair's, and other approved patterns.

Mills for grinding Grain. Corn and Cob Crushers.

Horse Powers and Threshing Machines.

Fanning Mills,
Rice do.
Coffee Hullers,
Sugar Mills,
Grain Cradles,
Seed Sowers,

Revolving Hay Rakes,
Hay and Manure Forks,
Scythes & Snathes,
Ox Yokes and Bows,
Log and Trace Chains,
Spades and Shovels.

Plow Castings, Castings for Horse Powers, Mill and Gin Geer, &c., &c. Also on hand and made to order, every description of Brass, Copper and Iron Wire, Cloth, Sieves, Screens, Riddles, &c., &c, all of which will be sold as low as they can be purchased at any establishment in the country.

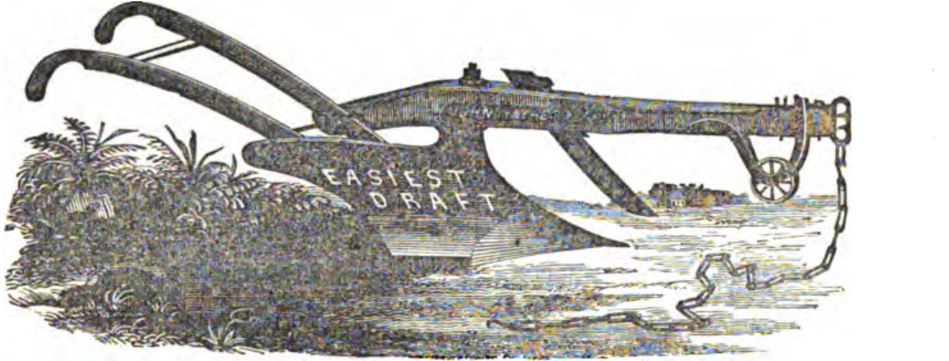
JOHN MOORE,
Ag.l Warehouse, 193, old No. 183 Front-st., New-York.
April 1—3t.

THE GENUINE MORGAN HORSE,

GENERAL GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of George A. Mason, two miles northeast of Jordan; Thursdays, Fridays and Saturdays at the stable of D. A. Munro, Camillus.

Terms—$10 the season. Insurance to be agreed upon. Pasturage furnished by either of the subscribers at reasonable prices. Escapes and accidents at the risk of owners. General Gifford was sired by *Gifford Morgan*. His dam a pure Morgan. Breeders of good horses are invited to call and see him.

April 1, 1848—3t. MUNRO & MASON.



JOHN MAYHER & Co's.

Highest Premium Improved Eagle Plow,

Manufactured and sold at the United States Agricultural Warehouse*, 195 *Front-St., N. Y.

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to cut out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island, October, 1847, whose able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the whole Union,) running in its natural course, and keeping in its tru position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Sneaths, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER & Co.,
United States Ag. Warehouse, No. 195 Front-st., N. Y.
March 1, 1848—3t.

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SALE OF SHORT HORNED CATTLE.

I WILL Sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers, and young Bulls. A catalogue with their pedigrees will be ready at the time of the fair.

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and six South Down Rams.

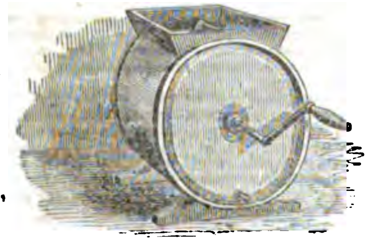
References—A. B. Allen, N. York; Sanford Howard and B. P. Johnson, Albany; Francis Rotch, Butternuts; and L. F. Allen, Black Rock. **JOHN M. SHERWOOD.**

Auburn, May 16, 1848.—4t

HORSE POWERS.

FARMERS in want of good Horse Powers and Threshing machines, will find them at the Albany Agricultural Warehouse and Seed Store. For description and recommendations, See Feb. No. of Albany Cultivator, for 1847 & 1848—also May No., 1848.

Descriptive Catalogue gratis.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos. 10 & 12 Green-street, Albany, New-York, or by mail

June 1, 1848. **H. L. EMERY.**

AFRICAN GUANO.

A SUPPLY of the above valuable Manure, just received and for Sale, at 2cts per lb., for one ton, or more; less than one ton, 2½cts. per lb. A cargo of Peruvian Guano soon expected to arrive, fresh from the Chinche Islands.

A. B. ALLEN & Co.,
June 1, 1848.—1t 189 & 191 Water-street, New-York.

AMERICAN AGRICULTURAL WAREHOUSE AND SEED STORE.

S. C. HILLS & Co., No. 43, Fulton Street, (removed from 189 Water Street) offer for sale, Prouty's Ploughs and Horse Rakes, Mayher's and Moore's Ploughs, Corn Mills, Corn Shellers—Catchpole's very superior Stalk and Straw Cutters, Hovey's do. do., Grain Cradles, Churns, &c. &c. Also, Garden and Flower Seeds raised by the Shakers, and warranted good; Fruit and Ornamental Trees and Shrubbery, supplied on short notice.

June 1, 1848.—3t

HYDRALLIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen. **H. L. EMERY.**

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost. Clark Lewis, 2d.

German, Chenango Co., N. Y., April 15, 1848.

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c. &c.

J. A. GIFFORD.

Hudson, May 9, 1848.—5t*

VIRGINIA LAND AND WATER POWER FOR SALE.

A FARM of 260 acres of highly improved, land with two water sites, 16 miles from Richmond, Va., on James River, is well adapted to the culture of wheat, corn, tobacco, oats and potatoes. The dwelling is spacious and has just been all put in complete order, and unsurpassed for beauty of position. There have been recently erected suitable buildings, barns, threshing machines, &c.; many springs of good water, well stocked orchard, good garden fences, &c. There are in the neighborhood two churches, post office, physician, and a saw and grist mill adjoining the premises. Also, a good and convenient market within a quarter of a mile, for all kinds of meats, fowls, vegetables, &c. There is a valuable coal mine working on the adjoining tract, and this property is estimated to abound in bituminous coal of first quality. Virginia lands can be purchased at 50 cts per acre, but the purchaser will remember he might as well settle in the interior of California. It is rarely such property is offered in market—it has the James River canal running through it, affording a cheap conveyance for all the produce. The situation is healthy and *truly beautiful.* The lands and proprietors in the neighborhood generally rich. It will be sold low, as the owner is compelled to sell. Apply to

J. B. DORSEY,
McCulloch's Buildings, New York, post paid.
June 1, 1848.—1t*

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

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Payable always in advance.

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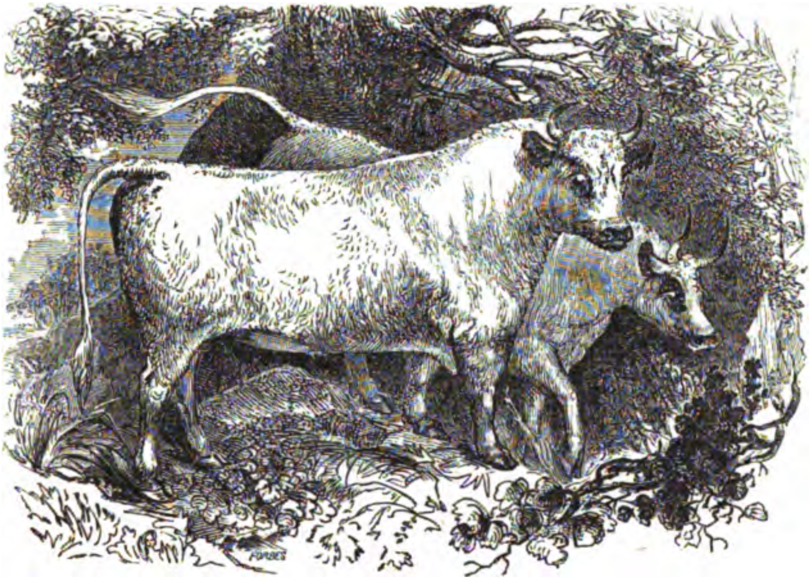
Of whom single numbers, or complete sets of the back volumes, can always be obtained.

☞ Advertisements inserted in the Cultivator, at the rate of $1 per 100 words, for each insertion.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, JULY, 1848. No. 7.



THE CHILLINGHAM WILD CATTLE.

The history of British Cattle is a subject of interest to us, from the fact that they constitute the source from which our own stock of the same species has been chiefly derived. In investigating this history, we find that at the time of the invasion and conquest of Britain by the Romans, under Julius Cæsar, fifty years before the Christian era, the ancient people of that country possessed great numbers of these animals. Besides the large herds which were kept more or less in a state of domestication, and afforded support to the inhabitants by their milk and flesh, many roamed unrestrained in the extensive forests.

The origin of these cattle has been a subject of much speculation. Whether the wild stock was really indigenous to the country, existing there before it was peopled by the human race—whether the tame stock was derived from the wild—or whether the latter originally sprung from a domestic race brought into the island by some of the early inhabitants, of whose origin and migration we have no account, are questions which cannot be positively answered. At the earliest period to which the history of Britain reaches, it is certain that men and cattle were found there, and we have good reason to believe, that the lineal descendants of both exist at the present day.

Three distinct tribes or stocks of cattle appear to have existed in the British Islands, from the earliest times: viz. 1, the Long-Horns, which originally occupied the low flat lands of England, and similar parts of Ireland, and were remarkable for the enormous length of their horns, their bulky frames and thick hides; 2, the Middle-Horns represented by the cattle of Devonshire, Herefordshire, Wales, and the Scottish Highlands of which the wild stock of Chillingham Park, Northumberland, are considered the type, and 3, the Polled or hornless cattle, the originals of which are probably represented by the wild stock of Chatelherault Park, Lanarkshire, Scotland.

As we before remarked, there has been considerable discussion in regard to the origin of these wild stocks, and the relation which they sustain to the present domestic British breeds; but we are acquainted with no author who appears to have investigated the subject so deeply, and who has written upon it so elaborately as W. C. L. MARTIN, in his Treatise on the Ox, which forms the first part of a work now in course of publication, entitled "Knight's Farmers' Library, and Cyclopedia of Rural Affairs."

Mr. MARTIN first gives a very interesting description of the various extinct species of ox, the bones of which are found in various parts of the old continent, including Britain, and compares their characters with the races at present existing. He examines the idea which has formerly been entertained, that our domestic cattle, including the wild stock alluded to, are the descendants of the ancient Urus, a huge and fierce species of wild ox, which formerly inhabited the uncultivated districts of Europe; and he shows clearly that the present races are not only entirely distinct from the Urus, but from every other species of fossil ox which has hitherto been discovered.

Mr. M. is inclined to regard the Chillingham and Chatelherault cattle rather as *feral* than as originally wild, being in a similar condition to the semi-wild cattle of South America, which are known to have sprung from a tame stock, introduced and turned loose in that country by the Spaniards, soon after its first settlement. We think this opinion is based on very reasonable grounds. His principal arguments against the position that this is a wild species, naturally, are, that it "exists no where as a free denizen of the forest—is not found in the wilds of Central or Eastern Europe"—is only kept in England like deer, within the bounds of a park and that it is, beyond doubt, specifically identical with the domestic race, the ancestors of which, in remote times, are believed to have roamed over the whole of Europe and the adjacent parts of Asia.

Some of the circumstances connected with the position that these cattle were formerly emancipated from a domestic state, are given in the following extract:

"Let us remember that there was a time in which Western Europe received its first tide of colonization, and that at that time man possessed flocks and herds. When Cæsar landed on our shores, he found the Celtic tribes in the possession of the dog, the horse, the ox, and even the domestic fowl. Had they not carried these animals along with them in their early migrations, sedulously preserving them while they hunted down the wild and ferocious? We think so; the urus is extirpated; it was so in Britain in Cæsar's time; and the aurochs [Lithuanian wild ox or bison] is reduced to a few individuals, protected by imperial mandate. But the ancient Britons had tame cattle in abundance, and among these a white breed peculiarly valued; this breed was long maintained, and, as may be expected, principally in the mountain fastnesses, never entirely subjected to the dominion of the Romans, nor yet to that of the Saxon invaders."

Authorities are quoted showing that in the tenth century, some of the tame cattle in England were white with red ears, resembling those of Chillingham Park; and it is mentioned that on one occasion a person who had offended King John, sent to his queen a present of four hundred cows and a bull, all white with red ears. It is shown further that the same records which describe the white cattle with red ears, speak also of the dark-colored and black breeds.

Mr. Martin concludes, therefore, that in these old accounts, we have evidence of the existence of a valued breed of white cattle; and he remarks that "the descendants of these might, at various times, have become feral; that is, might have roamed in the wild forests, and returned to a natural state of independence; * * and of these feral herds, the Chillingham wild cattle may be the lineal descendants, if, indeed, not of the tame race once so much esteemed."

These views are strengthened by the fact that breeds similar to the Chillingham exist, (though not in a wild state,) in other parts of Europe. "In Italy," it is observed, "there is a noble breed of white cattle, the bulls being models of beauty; such indeed, as the sculptured figures of antiquity portray with spirit and fidelity. Herds of this breed graze in the wild solitudes of the Campagna of Rome, tended by vaccari, or herdsmen." It is from this breed that bulls are obtained to gratify the savage taste of the population, by the exhibition of bull-fights [*]

The characteristics of the Chillingham cattle are given by Culley, in his "Observations on Live Stock," as follows: "Their color is invariably of a creamy white, muzzle black; the whole of the inside of the ear, and about one-third of the outside, from the tips downwards, red; horns white, with black tips, very fine, and bent upwards; some of the bulls have a thin upright mane, an inch and a-half or two inches long. The weight of the oxen [not bulls] is from thirty-five to forty-five stone, fourteen pounds to the stone,—[490 to 630 lbs.] The beef is finely marbled and of excellent flavor. From the nature of their pasture, and the frequent agitation they are put into by the curiosity of strangers, it is scarcely to be expected they should be very fat; yet the six-year old oxen are generally very good beef; from whence it may be fairly supposed that in proper situations they would feed well."

Their habits are thus described by Mr. Martin:—"These cattle are extremely shy and savage; and at certain times the bulls are very ferocious. The cows conceal their young in the dense fern and underwood; and it is dangerous to approach the lair; for should the mother percieve the approach of an intruder, or the herd be alarmed by the bellow of the calf, an impetuous attack from the former, or even the whole troop is the immediate consequence. Formerly these cattle were hunted with all the pomp and circumstance of the chase in the olden time; but from the frequent occurrence of accidents, the practice has now been adopted of the park keeper selecting his individual, and striking it down with a well-directed rifle-ball."

The semi-wild cattle of Chatelherault Park, Scotland, (the *Bos scoticus* of some writers), are somewhat different in their characters from those of Chillingham. "These feral cattle," says Mr. Martin, "are larger and more robust than the Chillingham; the body is dun white; the inside of the ears, the muzzle and hoofs black instead of red, and the fore part of the leg from the knee downwards is mottled more or less with black; the roof of the mouth and the tongue are black, or largely spotted with black. The cows, and also the bulls, are generally polled or hornless." Those which are castrated generally have horns. Though dun is the prevailing color, it is stated that calves are sometimes dropped which are "off the markings," as it is termed, and in such cases the color is black, or black and white mixed. It is said the breed never shows but these two colors.

On comparing this stock with the Galloways, there is evidently considerable affinity between them, and it is not improbable that they had a common origin. In the latter breed the dun color was formerly not uncommon and is even now occasionally seen; while, as has been mentioned, the black sometimes appears in the wild stock.

There can be no doubt of the antiquity of the Chatelherault or Hamilton breed of cattle; both history and tradition inform us of a similar race which in remote times inhabited the forests of Scotland. They were hunted as "beasts of chase," and the noble, though somewhat perilous sport has been thus alluded to by Scott:

"Mightiest of all the beasts of chase
That roam in woody Caledon,
Crushing the forest in his race,
The mountain bull comes thundering on."

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[*] Dr. Knox, in the ninth volume of the Scottish Quarterly Journal of Agriculture, gives it as his opinion that the Chillingham cattle are descended from an ancient Italian breed, introduced by the Romans.

"MANURES—THEIR NATURE AND ACTION."

The April No. of the Cultivator has been received, and I have perused the article on "Manures—their nature and action," by J. M. **Ward**. And I fully agree with him that "the right understanding of this subject is the foundation of all correct and profitable farming." And I frankly admit, that for many years I was of the same opinion of Mr. Ward, in regard to the very great value and importance to the farmer of the *nitrogen* in his manures. Impressed with this opinion, I have reasoned and talked to farmers of its use—I have written articles for publication upon this subject, and with a small box of "genuine Peruvian guano" in one hand, and a box of slaked lime in the other, I have lectured and illustrated to hundreds of farmers and others, of its great value for their growing crops, and the importance of fixing this volatile substance.

But by the force of numerous well attested facts, aided by study, practice, observation, and the application of the "sober second thought," I have been constrained to very greatly alter that opinion—in fact, to abandon it.

I have no favorite theory to advocate, no pride of opinion to sustain, only as far as truth will sustain me. I can, and do, most fully appreciate Mr. Ward's good and benevolent motives in giving his views upon this subject through the columns of the widely circulating Cultivator—his object was to further the great cause of Agriculture—to enlighten the path of the practical farmer—to point out to him a way to increase his profits by a more economical use of the means already within his reach. In giving my views so opposite to his—(for either Mr. W. or myself, are greatly mistaken in this matter.) I claim from him the same measure of charity, that I have meted out to him, in reference to motives.

I am well aware that M. Bousingault says, manure is valuable according to the amount of nitrogen it contains—and thousands of farmers, theoretical and practical, respond to it, as though it were a *fixed* fact.

Hence arises the *supposed* necessity and great importance of securing it in the manure heap, by the addition of dilute sulphuric acid—gypsum or sulphate of iron, (copperas) all of which substances possess the property of combining with the carbonate of ammonia a volatile salt, and converting it into a sulphate, a soluble, but not a volatile salt of ammonia.

I am also aware of the *absolute* necessity of nitrogen in the cereals—(grain,) and all other food, used for the sustenance of men and animals.

Ammonia is formed by a union of the nitrogen and hydrogen, in decomposing animal and vegetable matter —fourteen parts of nitrogen chemically combining with three parts of hydrogen.

If the advocates of that side of the question mean to be understood that the *nitrogen* in a given quantity, or quality of manure, is its most valuable part, I must beg leave to dissent from them—not in part, but in toto; and further say, that the nitrogen in manure is a substance of *no* consequence compared with the *inorganic* matters of the manure—and still farther, that as large crops can be grown without the use of nitrogenous manures, as can be with them, and I believe there is a vastly greater amount of Indian corn and wheat—(grains requiring much nitrogen in their composition,) grown in the United States, without the use of any kind of artificially applied nitrogenous manures, than there is by the aid of them.

But before proceeding farther, I wish to point out the analogy subsisting between the soil, the plant and the animal. Chemical research teaches us that some ten or eleven mineral or *inorganic* substances, enter into the composition of all naturally fertile soils. It further teaches us, that these *same* substances are found in the ash of plants, and it clearly establishes the fact, that plants derive their inorganic constituents from the soil, and upon the quantity, relative proportions and solubility of these substances in the soil, depends its fertility, rather than upon the quantity of what is generally termed the organic matter of the soil, viz. humus, vegetable matter, &c. And farther, analytical research has established the fact that the same inorganic bodies are found in the ash of the bone and muscle of animals, and that these same substances have been derived from the food upon which the animal subsisted.

Chemistry also teaches us that four elementary principles enter into vegetable structure, and hence are termed *organic* substances—they are carbon, hydrogen, oxygen and nitrogen. The three first are furnished by the atmosphere in sufficient quantity to meet the demand of the growing plant. To the above statements I feel sure of having Mr. W.'s assent. The nitrogen being the only question at issue between us.

His theory is, "that if we would obtain vegetable products *rich* in nitrogenised principles, we must surround the growing plant with animal or vegetable manures, containing an additional amount of these principles." Another is, "that one of the great problems for the agriculturist to solve, is how to furnish plants with the requisite nitrogen at the least expense"—and "that the *value* of manures in common use may be measured by the quantity of nitrogen which they contain, or their power of forming nitrates."

The above propositions of Mr. Ward, I believe, are wholly untenable, and were I not actuated by a desire to disseminate correct views in the cause of agriculture, I would never expend one drop of ink in attempting to expose their fallacy; and in order to more clearly elucidate my views, I must digress from the question at issue for a short time.

Chemical science has established the fact that vegetable food possesses a three-fold value—1st, bodies containing nitrogen, such as the gluten of wheat, the legumin of peas and beans, and in their chemical composition they are nearly identical with the muscle, lean meat of animals. 2d. Bodies containing no nitrogen, like the starch of the wheat and potato. 3d. Inorganic salts, all of which are serviceable in the animal economy.

"The nitrogenous bodies, from their solution in the blood, form the tissues, the actual organism. The bodies wanting nitrogen contribute by their more or less perfect combustion to the warmth of the animal body, and for the formation of fat; and the phosphoric acid and alkaline earths serve in building up the osseous frame work, besides constituting an essential part of every part of the animal system. Their values for the latter purpose are in proportion to the phosphates the ashes contain."

The nitrogenous and carbonaceous constituents of plants and animals are wholly derived from the four organic elements already named. The oxygen and nitrogen in a gaseous form, compose the air we breathe; oxygen and hydrogen, in certain proportions in a liquid form, compose the water we drink; carbon is charcoal, *dissolved*, or in a gaseous form combined with oxygen; and termed carbonic acid. These gaseous substances are susceptible among themselves, (and with the inorganic constituents of plants) of forming an infinity of chemical combinations, and of yielding an endless variety of products. 'Tis from the four organic elements that more than 99 pounds in a hundred weight of pine or fir wood are composed. 'Tis from these four substances that all the bulk of an elephant, or any other animal, is formed, that disappears when burned in the fire, and no human research has yet discovered any animal endowed with powers of assimilation sufficiently potent to convert into nutriment, carbon, nitrogen, and the other ultimate elements of animal substance. These elementary materials require the previous and more efficient action of vegetable chemistry; so thoroughly does it elaborate those elements, that little beyond solution and separation is required of the digestive functions of the higher orders of creation. It therefore follows, that animals cannot exist except through the instrumentality and intervention of plants. The soil might exist without the plants, the plants might live and die, though there were no animals to feed upon them. But the animal is, as it were, the creature and the consequence of both. The dead earth, the living plant, and the moving animal, are thus intimately connected.

From "the beginning" it has been decreed that man should obtain his bread by the sweat of his brow, but that *sweat* would have been unavailing, if it had also been decreed that man should have provided in manure the nitrogen his bread contains. Provision was made for this contingency, before "Adam delved, and Eve spun." And here the inquiry comes up, how has provision been made for this purpose? It has been reserved for modern chemistry to answer this question, and we find the answer in Prof. Horsford's letter, published in the Cultivator of July, 1847, in which he gives the amount of ammonia in a great variety of soils—not in pounds, but in tons. Something like an average of 8,000 lbs. avoirdupoise of ammonia in a stratum of one acre in area, and one foot deep. The "excavated earth" was taken from a depth below all traces of organic matter. The Illinois prairie soil was brought by a returning German, in paper, from a field that had been cultivated without manure for ten years, and this gave over three tons of ammonia, and the subsoil over two and a-half tons.

Prof. H. asks, "now what farmer ever carted from his manure yard 8,000 pounds of ammonia to an acre of land? One may almost say, what farmer ever carted one-tenth or one-twentieth part of this amount." He further says, "it is obvious that the amount of ammonia spread on fields in the ordinary distribution of barn-yard products, is of *no moment*. The quantity, with usual falls of rain, greatly exceeds in the course of a season any supply by human instrumentality. These results put the question of the *sources* of ammonia or nitrogen out of all doubt."

If plants are supplied with their requisite *inorganic* constituents, and with the right physical conditions, we may reap heavy crops of "highly nitrogenised products," without the aid of stable manure or guano. To sustain his views, Mr. W. cites the Prussian authority. I have no doubt of the different yield of produce by the different manures; but is there any more proof of this difference being occasioned by the ammonia, than there is of its being the result of the phosphates, and other inorganic salts in the manure.

He says: "the more liberal the use (of ammonia) the greater the yield." Petzhold, in his agricultural chemistry, gives the results of some experiments with various salts, and quantities of ammonia. These results seem clearly to contradict the above statement.

Prof. Liebig says, "the amount of nitrogen in manure is a measure for its amount of phosphates, and other mineral ingredients of the soil. Without phosphates, and without the other mineral elements of the food of plants, the *ammonia* exercises no influence whatever upon vegetable life." And Prof. Nesbit, of the Kensington agricultural school near London, makes the same remark. Now to substantiate the truth of some of the great principles laid down by Professors Liebig and Horsford, I shall adduce a number of well established facts, having a direct and positive bearing upon the question.

Several years since, Prof. Henslow of England, in order to test the value, (if any,) in fixing the ammonia in manure by the addition of gypsum, engaged some fifty or more farmers to institute a series of experiments for this purpose. Each experimenter was to make two compost heaps of manure and other materials according to a fixed rule, (by weight and measure) laid down by Prof. H. The only difference in the heaps one was to have the addition of a given quantity of gypsum, supposed to be sufficient to fix all the ammonia that would be generated during the fermentation of the heap. The two kinds were applied side by side, on various soils and a variety of crops, and the results were carefully noted.

The report* given by Prof. H. of the result, seems to leave the question wholly undetermined. His conclusions from these experiments—(fifteen in number) are given in this result. "It will be seen that with turneps the effect has been uniformly in favor of the gypsumed dung. With the straw of wheat the result is twice in favor of the gypsumed dung, once against it, and in one case, no difference. In respect to the wheat itself, it is six times in favor of the gypsumed dung, and six times against. The practical inference to be deduced from this part of the inquiry, favors the idea of using the gypsumed dung for a turnep crop, but shows that it produces no better effect than *un*gypsumed dung upon a wheat crop." [This certainly does not tell greatly in favor of ammonia in manure.]

In the *Gardeners' Chronicle*, May 11th, 1844, the editor gives the results of experiments obtained by a friend of his near St. Albans. The object of one of the experiments was to ascertain whether the expense of carting manures long distances could not be diminished by burning the manure and applying the ashes. The editor observes, if his experiments can be trusted, the results are of considerable importance, because it shows that stable litter burnt to ashes, is nearly as effectual as the common bulky manure.

The trial was made, as all trials should be, *on an exhausted soil*, consisting of a heavy loam. Turneps were sown on the 21st of June last, in drills 27 inches apart, and the space occupied by each experiment was exactly the same, viz: about the thirteenth of an acre.

	lbs.
No. 1.—No manure, gross weight of turneps,................	88
No. 2.—Horse dung, 4 cwt., lime, half a bushel; the lime was slaked and mixed with the dung six weeks before it was put into the soil; this was for the purpose of driving off the ammonia. Weight of turneps,................	462
No. 3.—Horse dung, 4 cwt., sulphuric acid 2 lbs.; applied six weeks before it was put into the soil; this was for the purpose of fixing the ammonia. Turneps,............	444
No. 4.—Horse dung, 4 cwt., thrown into a heap six weeks before using..............................	398
No. 5.—Horse dung. 6 cwt., same as above, do.,............	429
No. 6.—Horse dung, 8 cwt., same as above, do.,............	518
No. 7.—Horse dung, 5 cwt.; burnt to *ashes* with free access of air,..............................	429
No. 8.—Dung, 5 cwt., burnt with a very limited supply of air until the vegetable matter was burned into charcoal....	455
No. 9.—Dung. 5 cwt., sulphuric acid. 5 lbs.; mixed with the dung. and then carbonized like the last,................	417
No. 10.—No manure,..............................	79

The editor remarks, "If these results can be relied on, we shall come to the conclusion, 1st, that 5 cwt of stable litter when burnt, is as good as 6 cwt. of raw manure; and 2d, that after all that has been said about the importance of ammonia in manure, the crops are as good where that principle is driven off, as where it is retained by fixing."

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* Colman's Report on European Agriculture, vol. 1, part 5, page 430.

Prof. Nesbit, of or near London, gave a lecture before an association of farmers at Trying, England, a year or two since; [reported in *Mark Lane Express*, June 22, 1846;] in which he spoke of the importance of the inorganic or mineral constituents of plants, as found in their ash. A Mr. Dawe, a farmer present, confirmed it by saying, "I have found the ashes of burnt wheat very productive; I had a stack of wheat accidentally burnt, and I have used the ashes for manure; the consequence was, as good a crop as I could have had from guano." Mr. N. replied, "exactly so, in the burnt wheat you had all you wanted."

Liebig says, "the ash of the same species of a plant are the best manure for a crop."

At a discussion "Question," before the London Farmer's Club, as reported in the *Mark Lane Express*, of November 8, 1847: "What evidence is there that dung is deteriorated by drying, &c.," Prof. Nesbit led off the discussion, and from experiments in his laboratory made out a loss of one pound of ammonia per ton; the market value of the cheapest may be estimated at 1*s*. per pound—a loss to the farmer of 20*s*. per acre, if 20 tons are applied, if the manure is suffered to become dried. But he has not produced any evidence to show that ammonia is worth a shilling a pound for agricultural purposes.

A farmer present, a Mr. Cheetham, observed, "that without boasting, he could say, that few persons had been more successful in growing turneps than himself. For more than 22 years he had never sown twice nor missed a crop. He said "he was not able to enter into the various chemical questions connected with agriculture, or to discuss scientifically the benefits to be derived from *ammonia*, but he would mention a fact which seemed opposed to the notion of *ammonia* being of such very great importance as a manure." Some years ago they were short of manure; his father, who was then a farmer, bought some very old manure which had been lying scattered over a large surface at Stamford. This was turned over when intended for use, and there was sufficient moisture to cause it to ferment, yet at the time when it was applied to the land, it was in appearance little better than barley chaff. Notwithstanding its appearance, however, the crop of turneps was the most splendid that he had ever seen. He began farming in 1822, and having this example before his eyes, he determined using year-old manure.

In the *Mark Lane Express* of January 10, 1848, is a communication by Mr. Nesbit, on the recent discovery of an extraordinary amount of phosphoric acid, in some marl near Farnham, England. It has been observed wherever this marl came to the surface, the hops and the wheat grew almost without manure, and when applied to other lands, the fertility was remarkably increased.

This led Prof. N. to institute a series of most careful and rigid experiments, which resulted in proving the existence of about 5 per cent of bone earth, an extraordinary amount almost unparalleled in the natural or chemical history of soils. Ten tons of the dried marl would be an equivalent for a ton of bones. And bones have been long known as a valuable manure; a portion of their fertilizing properties *have been* attributed to their organic part, the oil and gelatine, as the last contains much nitrogen. Liebig, a few years since, announced that the good resulting from the use of bone manure, was due to the "bone earth," (phosphate of lime,) and not to the organic part, as generally supposed; this statement was received with disbelief by many. But many accurate experiments have established the fact, that burnt bones are quite as efficacious for manure, as those not deprived of their animal matter; and burnt bones contain no nitrogen. So, too, when he announced the great economy of dissolving bones in sulphuric acid, and forming the easily dissolved super phosphate of lime, so that 3 or 4 bushels of ground bones thus dissolved would be as efficient as 16 or 20 bushels applied in the ordinary way. This idea was ridiculed by many in England as a "bubble that would burst and be dissipated into air—into thin air." The truth of the above statements have been repeatedly verified, and are fully corroborated by Mr. Colman, page 364, part 8, of his European survey.

In the London *Gardeners' Chronicle* of April 4, 1846, is an interesting table of experiments by Prof. Daubeny with several kinds of manure, upon the turnep crop. But I cannot go into particulars. The result of his experiments proved that a given quantity of phosphorite, or natural mineral phosphate of lime, was as efficient as an equal amount of bones, and that 22 tons of *nitrogenous* manure per acre, gave but a few cwt. more of turneps than 12 cwt. Spanish phosphorite, entirely destitute of nitrogen. I could cite numerous other facts to prove my position, but I will come nearer *home* and adduce a few. I regret, however, that I shall from the length of this article, be obliged to treat them in a very summary way.

Many of the readers of the Cultivator are aware of the existence of a mineral substance found in New-Jersey and farther south, and known as "green sand," which possesses very valuable properties as a manure. It does not, so far as I can learn, contain any *nitrogen*, but it does produce very marked effects when applied in certain quantities upon the sandy lands of New-Jersey. And I wish I could get Prof. H. D. Rogers' glowing account of its effects "upon fields where the soil originally was nothing but sand." He says: "A Mr. Wooley manured a piece of land in the proportion of 200 loads of good (nitrogenised) stable manure per acre; by the use on the same kind of soil of 20 loads per acre of the green sand, the crops, clover and timothy, were much the heaviest upon the section which had received the marl. Difference in cost of manuring the land: stable manure $2.00 per acre, marling $5. "Land which had been sold for $2¼ per acre, in consequence of the permanent increase in its fertility from the marl, is now worth $37 the acre." The great value is due to the potassa which it contains.

President Hitchcock, in his "geological survey of Massachusetts," devotes several pages of his valuable report to an account of a kind of marl found in different localities in Massachusetts, which he calls "muck-sand"—but frequently called quick sand. He gives details respecting the good effects of this quick sand, dug from many feet below the surface; and in some instances the good results lasted for 10 to 17 years, fully equal to the best stable manure in its immediate effects, and more permanent.

The great fertility of subsoils, and that dug from ditches, have been thousands of times noticed—even out-producing the most highly manured soils.

The Hon. Dixon H. Lewis, in some observations at a meeting of the New-York Farmers' Club last summer, stated the "best soil he ever had was that thrown out of ditches."

In the last September number of the Cultivator, Mr. Editor, in your "Sketches of farming in Western New-York," you mention the great fertility of the subsoil for several feet in depth, on Mr. Johnston's and Mr. Delafield's farms.

"That where ditches and drains had been dug, and the earth which had been taken out was spread over the surface, the wheat, barley and oats were heavier than in any other part of the field." In the present (April) number of the Cultivator, containing Mr. Ward's article, there is a communication from Mr. Dox, who mentions ears of corn, 22 inches long, grown on subsoil raised from a well, and "of some timothy or herds grass growing on a soil that was thrown out in digging a cellar, some of the heads of which were nearly 14 inches long." Now I do not believe, either the Wandering Jew, or Peter Rugg, in all their *travels* ever saw such ears of corn or heads of grass, grown by the aid of *nitrogenized* manures.

Where do the countless millions upon millions of bushels of corn and wheat grown upon the western prairies, obtain their nitrogen from? Not from the application of nitrogenised manures.

How has the fertility of the soil of Egypt been kept up from hundreds of years before Abraham's time, down to 1848 of the christian era? By annually having restored to it the finely comminuted mineral matters, (by the overflow of the Nile,) to replace those drawn from the soil by the annual crops.

Precisely thus, has the fertility of the alluvial lands on the Deerfield, (Mass.) river, been kept up for more than a century; and so upon others. I have named but few facts compared with what I could cite in this case —but enough to sustain my propositions. So here I rest the matter. LEVI BARTLETT. *Warner, N. H. April* 10, 1848.

"IRISH ROSE BUTTER" FOR THE U. S. NAVY.

In our last volume, pages 213, 284, some remarks are made in relation to the subject indicated by the above caption. The indefatigable Secretary of the New-York State Agricultural Society, Mr. JOHNSON, has taken hold of the matter, and has unraveled some of the mysteries with which the business of supplying Uncle Sam's navy with butter has hitherto been enveloped. The results of his investigations are published in the Society's *Transactions* for the last year, from which we gather the following facts.

The navy of the United States requires 60,000 pounds of butter annually. In the proposal issued by the department, it is said—"the butter must be of the description, quality and manufacture of the present navy butter, made in the mode of '*Irish Rose Butter.*' The milk must be thoroughly worked out, and the butter cleansed of all impurities, and extraneous substances, and be put up in seasoned white oak firkins, containing about 80 lbs. each, well and strongly hooped, so as to be perfectly air and pickle tight. Persons offering proposals are required to produce satisfactory evidence that their butter will stand the test of tropical climates, and preserve its sweet and wholesome qualities for years."

From this statement, it was deemed important to ascertain how "*Irish Rose Butter*" was made, if there was any such butter. The secretary therefore opened a correspondence with gentlemen engaged in the butter trade in Liverpool, and in various parts of Ireland. It appeared that most of these dealers never heard of "Irish Rose Butter," and that if any is now made under that name, which is doubtful, it is of a quality wholly unsuited to the navy, or for long keeping. A letter to the secretary from a house in Liverpool, says—"We understand that there is *Rose butter*, which is put up with very little salt, and is nearly as good as fresh butter, but *it is not fit for export.*"

No other intelligence was obtained concerning "Irish Rose Butter," except that a letter from Clonmel, in Ireland, stated that one of the Waterford houses brands, the firkins of their best quality of shipping butter with a rose. But this is not navy butter. That for the British navy is obtained from Cork, "where a larger quantity of salt is used in the manufacture, and where it is made up expressly for foreign exportation." This butter is packed in good tubs or casks, containing 66 to 70 lbs. each. "The quantity of salt mixed in the making of the butter, to be about one pound of salt to 10 or 11 pounds of butter, and the buttermilk to be well worked out of the butter, without using, however, the hand too much. In packing, care should be taken to pack it as closely as possible." In packing the butter, space is left at the top of the cask for pickle, and at the port of exportation, the pickle is added, with one or two pounds of salt additional, to each cask, to keep the pickle at full strength.

A letter from Clonmel describes the mode of making the celebrated "Irish butter" of that neighborhood, as follows:—"Our best makers have large, airy, cool dairies, and churn twice or three times a week, which depends on the heat of the weather. Caution must be used not to allow the cream to be too long in the tubs and pans, or until it gets sour, as the butter will then be inferior and what is termed *cheesy*. The buttermilk must be well washed out of the butter, and when salted, it should be packed *firm* into the firkin. These, with *great cleanliness*, are the principal things to be looked after in the manufacture, otherwise your butter will not keep its quality. The quantity of fine salt is three pounds to the firkin, containing about 65 pounds. The butter in this district is made expressly for the London and North of England markets; in the former, at certain periods of the year, it takes precedence of the Dutch."

But the Secretary has ascertained that notwithstanding the terms in the government *proposals*, that the butter for the U. S. navy, must be "made in the mode of *Irish Rose Butter*," not a word is said about such butter in the *contract!* In reference to this inconsistency, it is asked—"Why was this so drawn? Was it to prevent those who never heard of '*Irish Rose Butter*,' and knew not how it was made, from offering proposals? It is presumed it must have been inserted through inadvertence on the part of the person preparing the notices. But from whatever reason it was inserted, *its effect has been*, beyond all question, to *prevent* persons from offering proposals, who might otherwise have done so."

It has been proved, as we learn from the paper under consideration, that the butter which has been furnished under the proposals alluded to, has usually been what is called "Orange county butter," and it is said "the gentleman who has special charge of this department, is of opinion that *no butter made out of Orange county* will resist the action of tropical climates and preserve its qualities for years."

As the quantity of butter required for the supply of the United States navy on foreign stations, is not less than 60,000 pounds annually, and is continually increasing, the question is considerably important, whether all this butter must be made in the county of Orange? What are the *peculiar* qualities imparted by the territory encompassed by the boundary lines of that county, that it should be entitled to such pre-eminence? It is admitted that soil, climate, and quality of herbage have an influence on butter; but can the county of Orange claim any special advantages of this kind? It is admitted also, that a large portion of the butter produced in Orange county is of excellent quality; but the question is simply, whether the same skill and attention which is there given to the manufacture, will not or does not produce equally as good butter in other counties? Evidence enough is already obtained to answer this question affirmatively.

The inquiries instituted by the Secretary of the Society, clearly establish the fact "that a very large portion of the butter marked 'Goshen' [and sold as such] in the New-York market, is actually made out of Orange county;" and, as is observed, it is but justice that credit should be given to the counties where it is made. From the information given by several of the most extensive dealers in butter in New-York, it is found that "there is hardly a county in the State" from which some excellent butter is not obtained. But the Secretary's correspondence shows that from the counties of Chemung, Broome, Chenango, Tompkins, Tioga, Delaware, Sullivan, Ulster and Greene, large quantities of butter are annually obtained of a quality equal to that made in Orange county—that a large portion of it is in fact sold by dealers as "Orange county butter." It is only marked "Orange" or "Goshen" to conform to certain prejudices. One large dealer says:—"The butter made in the county of Chemung is equal to that made in Orange county, and will stand the *southern climate* as well. Also, that made in Tompkins county, is well suited for shipment south, and *stands the salt air as well as any butter we receive here.*" I find that western dairies sell as well as the best 'Goshen butter,' *when sent south*, and in *many cases better*, as it has more color."

Another dealer who, we are told, has an establishment in New Orleans, to which he has been in the practice of sending butter from Western New-York, speaks of the butter from several dairies in Chemung county, which he states has been "sent south," and stands the climate equal to any from the Orange county dairies, and fetches as high a price as any from that county.

Another speaks of a dairy in Chemung, the butter from which for the last fifteen years, has not sold for less, with one exception, than eighteen cents per pound, "and for the most part has brought from twenty cents to as high as twenty-eight cents" for the whole quantity made. He adds:—"there are several dairies in the county that bear the same high character, and *will compare, to say the least, with the best that Orange does, or ever has produced.*"

Now the great fact to which all this information points, is, that good cows, good pastures, good water and good air, with an observance of proper rules in the management of milk and cream, will insure good butter, whether the dairy is located in the county of Orange or elsewhere. In regard to pastures, it may be observed, that rather elevated situations, affording "fine sweet grass and cold springs," would be preferred. Fortunately, in our extensive country, districts which possess all the natural requisites for the production of butter and cheese, are neither few nor small. Both of these departments of husbandry are becoming every year of more importance, and when we consider the great demand which exists for dairy products of prime quality, and the great difference in the price of such and those of inferior or ordinary quality, it certainly behooves all engaged in the business to aim at perfection.

MEMOIR OF THOMAS GREEN FESSENDEN.

BY F. HOLBROOK.

Editors of the Cultivator:—The plan adopted in the Cultivator, of giving a short record of the life and character of men distinguished as friends of the farmer, by their able efforts in the promotion of agriculture, meets my cordial approbation; for as you have rightly said,—"the exhibition of such examples cannot fail to exert a salutary influence on society." We may all learn from the life and labors of such men, that the Agricultural profession is not, as has too generally been supposed, a *menial* employment, but one affording full scope for the exercise of the best intellectual powers. And we further see, strikingly exhibited, the fallacy of the sentiment so generally indulged, that farming is a sort of stereotyped business, long since brought to perfection; and that all we have to do, is to follow the practices handed down through a long line of ancestry, unaltered and unimproved, regardless of all light elicited either from the developments of science, or enlightened practice.

Among the distinguished laborers in the field of agriculture, no one is worthy of more honorable notice than our respected and lamented friend, Thomas G. Fessenden, for fifteen years editor of the *New-England Farmer*. The limits afforded in your journal are necessarily so circumscribed, that we shall not be able to present more than a very brief sketch of the life and character of our friend; but though brief, it shall be the tribute of admiration for his amiable and generous nature, and respect for his many and valuable public services. Biographical sketches of Mr. Fessenden were written soon after his decease by N. Hawthorne, Esq., and Mr. Colman, to each of whom we are indebted for the principal data of this sketch.

Thomas Green Fessenden was born in the year 1771, at Walpole, New-Hampshire, and was the eldest of nine children of the Rev. Thomas Fessenden,—a man of distinction in his profession, and long settled in the ministry at Walpole. His early education was such as the district school of those days afforded. He soon evinced those habits of inquiry and close application which so much distinguished him in after life, and rendered that life so valuable to the agricultural world. His active and inquisitive mind turned to the best account the facilities afforded by his father's library, and so rapid was his progress in study, that, at the early age of sixteen he became himself the instructor of the village school. Most of his time in the summer months, however, was given to labor on his father's farm towards the support of a large family, in moderate circumstances. His dexterity and efficiency in the use of the scythe, in his younger days, was a matter of much honest pride with him in after life; and it was his frequent custom for several years after he left the paternal roof, to spend the haying season with his father, assuming the brunt of the labor himself.

Soon after the age of manhood, Mr. Fessenden entered Dartmouth College, where he supported himself by his own industry, without calling upon his father for assistance. This was done mostly by the wages earned in teaching district schools, and classes in sacred music, during the winter months. He was equal to the performance of any of the sacred music of those days, playing one part very efficiently with his bass-viol, and carrying another with his voice; and it was immaterial which part, he being always ready to sustain the weakest.

In his "Jonathan's Courtship," a truly original effusion produced while in College, we have early evidence of that witty and humorous turn which, a few years after, was the source of so many fanciful sentiments and poems. He was remarkable too for his satirical humor, and he possessed a singular combination of the strange and ludicrous; and yet it was evident to all who knew him that his satire was wholly free from hatred or ill-will, and that it was impossible for a heart so generous as his to indulge any feelings of this kind.

Mr. **Fessenden** graduated at Dartmouth, in 1796, and entered upon the study of the law at Rutland, Vt. with that eminent practitioner, Nathaniel Chipman, Esq., with whom he afterwards formed a connection in business. He was not in his proper element however, in the practice of law, for his ruling taste for literary and scientific pursuits, and his childlike simplicity of character, poorly qualified him to succeed in a profession where shrewdness and tact are so essential.

In the year 1801, a company of mechanics who were interested in some newly invented machine, employed Mr. Fessenden, to go to London for the purpose of obtaining a patent. After arriving there it was found that the machine was destitute of sufficient merit, and his journey proved a fruitless one. He found himself a pennyless and friendless stranger in that great city, thrown entirely upon his wits for a support; and here those qualities of satirical humor before mentioned soon afforded him a resource. He became acquainted with one Perkins, the patentee of the famous Metalic Tractors, which were represented as performing the most marvelous and extraordinary cures of various diseases. This humbug had gained considerable favor with the people, although stoutly opposed by the professional corps. At the request of Perkins, Mr. Fessenden made it the subject of a Hudibrastic poem, entitled "Terrible Tractoration," which, for its satirical and strangely ludicrous humor, was much applauded, and won the author quite a reputation. "The poem," says his friend Hawthorne, "professes to be a poetical petition from Doctor Christopher Caustic, a medical gentleman who has been ruined by the success of the [illegible] Tractors, and who applies to the Royal College of Physicians for relief and redress. The wits of the poor Doctor have been somewhat shattered by his misfortunes; and with crazy ingenuity he contrives to heap ridicule on his medical brethren, under pretence of railing against Perkinsism. The poem is in four cantos, the first of which is the best, and the most characteristic of the author. It is occupied with Dr. Caustic's description of his mechanical and scientific contrivances, embracing all sorts of possible and impossible projects; every one of which, however, has a ridiculous [illegible]. The inexhaustible variety in which they [illegible] proves the author's invention unrivalled in [illegible]. Long afterwards, speaking of the first conception of this poem, the author told me that he had [illegible] during a solitary day's ramble in the outskirts of London; and the character of Dr. Caustic so [illegible] impressed itself on his mind, that, as he walked through the crowded streets, he burst into [illegible] fits of laughter." This poem ran through [illegible] editions at that time, and a revised edition, with [illegible] upon the men and things of the day, was [illegible] the author, in 1837.

In the year 1804, Mr. **Fessenden** returned to New-York city, and soon after commenced the publication of the "Weekly Inspector," a paper chiefly of a political character; he also published a book, entitled "The Register of Arts." He afterwards removed to Philadelphia, where he was engaged in literary pursuits, and published his humorous poem, "Pills, Poetical, Political and Philosophical, by Peter Pepper-Box, Esq., Poet and Physician;" and also his satirical poem, entitled "Democracy Unveiled."

In 1807 or 8, he removed to Brattleboro, Vt., where he had two brothers residing, and edited with much ability "The Brattleboro Reporter," a weekly and miscellaneous newspaper; and afterwards, at Bellows' Falls, Vt., "The Intelligencer," a paper of like character. Here he published "The Clerk's Companion," a book of legal forms; an enlarged edition of "Deane's New-England Farmer," a Dictionary of Agriculture; and "The Lady's Monitor." He was also continually called upon for New-Year's poetical addresses, Fourth of July Odes, &c., &c., and was somewhat engaged in the practice of his legal profession. During his residence in Vermont, his attention was considerably directed to agriculture, and he wrote upon the subject for his paper. Here, his hitherto eventful life and ever-varying fortunes became more settled and prosperous; and in the year 1813, he formed a most fortunate and happy connection in marriage. Mrs. F. was of all others, the person of most desirable qualities to make the life of such a man useful, prosperous and happy. Aided by her excellent judgment and care, the earnings of his persevering labors, resulted in a comfortable independence for their declining years.

Here, Mr. **Fessenden** won the affection and esteem of all who knew him, by the simplicity and amenity of his manners, his generous and frank nature, and his strict integrity. His application to study was untiring; he never had a moment for idleness, and his memory being remarkably retentive, there could be hardly a subject of importance started in conversation, with which he was not more or less familiar. He was remarkable for his good nature, and many are the sallies of his wit, remembered by his friends. His generosity of heart knew no bounds. The following little incident illustrates his utter thoughtlessness of self, when this quality was called into exercise. When he first removed to Brattleboro,—an entire stranger to most of the inhabitants—he took a morning walk, and coming to the toll-bridge, found there a poor family whom the gate-tender had stopped for the want of money. Mr. F. at once emptied his pockets of all the change he happened to have and let them through, passing along with them. On his return he found himself in a like situation, and it was not without some parleying and explanation that he succeeded in getting through.

In 1822, Mr. **Fessenden** was called to Boston, as editor of the *New-England Farmer*, a weekly journal devoted to agriculture. He edited this paper for fifteen years, or until his death, which occurred November 13, 1837. In this time he also published his "Complete Farmer," his "American Gardener," and edited the *Horticultural Register* and *Silk Manual*. His labors during these years were most assiduous and untiring; it being his habit to devote no less than sixteen hours of the twenty-four to study. As conductor of the *New-England Farmer*, he achieved the crowning labors of his life. The paper had an extensive circulation throughout New-England, and may be said to have "fertilized the soil like rain from heaven."

To this day, we turn over the pages of that journal with admiration for the research those labors evince, and for the great amount of valuable information the volumes afford. As an example of the vigorous yet facile style of his writings for the *Farmer*, we quote the following truthful remarks from his "Acknowledgments to Patrons and Correspondents," at the close of the 12th volume:

"We may, perhaps, be allowed to state that our predilections to the art of all arts, increases in a direct proportion to the attention we bestow on it; for like every thing else possessing intrinsic excellence, the more intimate the acquaintance, the more obvious are its merits—the more we explore the avenues of culture the stronger the perception that its ways are profitable as well as pleasant, and 'all its paths are peace.' And, indeed, the world is apparently now becoming practically impressed with the primary importance of those pursuits which feed and clothe the human race; and to which we are indebted for all which makes life a blessing, or gives civilised a superiority over savage existence."

At the close of another volume he says:—"We are highly gratified in perceiving that the interest which attaches to the primitive and most important of the arts is every year perceptibly increasing in zeal, knowledge and perseverance. If we still continue thus to press forward, we cannot fail in the common course of events to become not only prosperous as individuals, but powerful, respectable and respected as a nation. Improvements in agriculture are pioneers, heralds and companions of all other improvements. The accurate science and correct practice of tillage alone can precede and introduce the charms, the decorum, the dignity as well as the substantial and indispensable requisites of civilization. If Ceres* did not sustain the Graces, as well as support Minerva† and her retinue, they would disappear, as the tints of the setting sun fade in the sky when evening advances."

During a residence of several years in Vermont, in later life, Mr. Fessenden added much practical knowledge of agriculture to that acquired in his youth; and this, combined with his thorough and extensive acquaintance with all the writers of merit, on practical and scientific husbandry, and his perfect readiness of pen in imparting all the information upon any subject in hand which could be elicited from books, fitted him admirably for his editorial duties. This paper had the patronage and support of men of the first intelligence and influence throughout the New-England States, and it is not perhaps too much to say, that no other single agent contributed so much to the advancement of a more enlightened practice in husbandry, as the *New-England Farmer*.

Many are the pleasant visits we have enjoyed at the house of our kinsman and friend. However tired and worn down with his numerous labors, he ever became cheerful upon entering his quiet and happy home; and we always expected some sally of his wit during these hours of social life. He had a great fondness for sacred harmony, especially the wild and stirring fugues of Billings, Holden, and other early American composers; and seating himself at the table of a Sabbath evening, with bass-viol in hand and his young friends around him, would lead off in fine style, carrying with his voice any part we assigned him, and feeling, apparently about as young as any of us. He was peculiar at times, for his absence of mind, and it was not unusual for us to pass him in the streets of Boston so deeply absorbed in study, as to be wholly unmindful of the world around him.

Mr. Fessenden had the confidence and friendship of a wide circle of intelligent and influential men in Massachusetts interested in the promotion of agriculture, and he is still remembered by them with sentiments of affection and respect. Those sentiments have been beautifully expressed in the following extract:—

"On the 13th day of November, 1837," remarks Mr. Hawthorne, "while on my way to Boston, expecting shortly to take him by the hand, a letter met me with an invitation to his funeral. He had been struck with apoplexy on Friday, three days before, and had lain insensible till Saturday night, when he expired. The burial took place at Mount Auburn on the ensuing Tuesday. It was a gloomy day, for the first snow storm of the season had been drifting through the air since morning; and the 'garden of graves' looked the dreariest spot on earth. The snow came down so fast, that it covered the coffin in its passage from the hearse to the sepulchre. The few male friends who had followed to the cemetery, descended into the tomb; and it was there that I took my last glance at the features of a man, who will hold a place in my remembrance apart from other men. He was like no other. In his long pathway through life, from the cradle to the place we had now laid him, he had come—a man, indeed, in intellect and achievement—but in guileless simplicity, a child. Dark would have been the hour, if, when we closed the door of the tomb upon his perishing mortality, we had believed that our friend was there!"

"It is contemplated to erect a monument, by subscription, to Mr. Fessenden's memory. It is right that he should be thus honored. Mount Auburn will long remain a desert, barren of consecrated marbles, if worth like his be yielded to oblivion. Let his grave be marked out, that the yeomen of New-England may know where he sleeps; for he was their familiar friend, and has visited them at all their firesides. He has toiled for them at seed time and harvest; he has scattered the good grain in every field; and they have garnered the increase. Mark out his grave, as that of one worthy to be remembered both in the literary and political annals of our country; and let the laurel be carved on his memorial—stone—for it will cover the ashes of a man of genius."

This design has since been realised, by the erection of a marble monument, bearing the following appropriate inscription:

Thomas Green Fessenden, died Nov. 11, 1837, aged 65. This monument is erected by the Massachusetts Society for promoting Agriculture—by the Horticultural Society of Massachusetts—and individuals, as a testimony of respect for the literary talents and acquirements of the deceased, and his untiring labors in promoting the objects of the above institutions."

We close with the following tribute from the Rev. W. B. Tappan, written a few days after Mr. F.'s burial.

"THOMAS GREEN FESSENDEN.

Mount Auburn, as a miser, gathers wealth
From the world's heap; not artfully, by stealth,
But shamelessly and open. Sits he now
Alone in winter's drapery, his brow
Circled by solemn trees; and contemplates
His gains, and those to come with which the Fates
Shall swell his hoard, already rich with store,
We knew not how to part with. Yet one more
Is added. Moral excellence and wit,
Talents not idly hid, worth that would sit
Gracefully on a king, the crown adorning,—
These have been stolen, this violence hath our mourning.
Yet, Plunderer! there's hidden in thy womb
Nought but the casket, which at trump of doom,
Thou—saith the oracle of God—shalt render,
The jewel lodged above! who'll tell its splendor?"

To kill all Weeds.—The leaves are the lungs; no plant can grow if it cannot breathe; and if it is prevented from breathing, it most soon die. Some persons dig for feet into the soil to eradicate roots; a much easier way, is to keep the tops buried, by repeated plowing, or by a thick coat of tan or sawdust. Elders and willows may be very easily killed without grubbing, by merely keeping them closely cut to the surface, and pulling off all the sprouts as they appear. Cut them off in the spring or early summer, burn the brush upon the stubs, and then remove the sprouts during the season, and the work is completed.

Training Oxen.—It is well to learn oxen the art of *backing*. Begin with an empty cart on a descent; then on a level; then with a gradually increasing load; then uphill. Cattle may in this way be taught to back with facility a heavy load.

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* The goddess of Agriculture.

† The goddess of Wisdom and of the Liberal Arts.

SKETCHES OF FINE FARMS.

Having lately had an opportunity of spending a few hours at some fine places in Dutchess county, we submit a hasty and necessarily imperfect sketch of some of the objects which met our attention.

The farm of J. W. WHEELER, Esq., of Hyde Park, consists of 300 acres. It has been in his possession for five years, but at the present time about 200 acres are rented. The natural situation of the place, on the east bank of the Hudson, is very pleasant, and Mr. W. has done much to improve and beautify it. His buildings are tasteful and neat; his grounds are handsomely laid out, and mostly enclosed with stone walls of the best kind. It is designed that all the outline fences shall be of stone, and that the few internal ones which are necessary, shall be of iron.

The soil of Mr. WHEELER's farm, generally, is of rather a loose texture, somewhat gravelly in places, underlaid by slate rocks. It is well suited to the production of Indian corn, rye, and most kinds of fruit common to the latitude—especially apples and pears. There is a large number of pear trees, and we have never seen finer or more healthy ones, or those that were better set in fruit.

The principal products of the farm are fruits, Indian corn, rye, potatoes and hay. The grain is chiefly used in fattening beef—the other articles are sent to the New-York market. Most of the cattle to be fattened, are commonly purchased in the fall, fed through the winter, and sold the following May or June. Oxen are employed in farm labor. They are at all times well fed, and not being over-worked, they get in high condition, and with only a little extra feeding, are turned off for beef at good prices. Mr. W. showed us six handsome and well-fattened oxen, which had been sold to be taken away in the month of June, at an average of a hundred dollars each—estimated equal to nine dollars per hundred for the nett beef, or four quarters.

All the stables and stock yards are constructed to prevent the waste of any portion of the excrement, liquid or solid. Large quantities of good manure are made by the stall-fed cattle and other animals, and it is all carefully saved and applied to the land in the most judicious manner. The yards are kept covered with muck and litter, and the manure is made up into compost heaps, where the decomposition is so regulated, and the gases so absorbed, that there is no loss of fertilizing elements. It is commonly applied to hoed crops, and is thoroughly incorporated with the surface-soil.

Mr. WHEELER has some Ayrshire, and some Durham cattle. He prefers the former for the dairy. He has two Ayrshire cows and a bull which were imported, and several young animals of their produce. They are good stock. Only one of the Ayrshire cows had a calf the past spring. This one ("Effie,") and a "Dutch" heifer were put on trial together, for butter, for a few weeks, and the two yielded from twenty-two to twenty-three and a-half pounds per week. Few cows, of any breed, carry more good points for the dairy, than the Ayrshire last mentioned.

We were highly pleased with the good order, neatness, and the general evidences of good management displayed on the premises of Mr. WHEELER, and regretted that circumstances did not permit us to make a longer stay. It was also with much regret that we were compelled to forego the pleasure of a visit to the fine places of Mr. FULLER, Maj. ALLEN, and Mr. BUTLER, all situated in the same neighborhood.

From Mr. WHEELER's we passed up the river bank to Ellerslie, the residence of WM. KELLY, Esq., near Rhinebeck. This place, consisting of about 600 acres, has been in Mr. K.'s possession about seven years. In its original purchase and subsequent improvement, he has made large expenditures, and whether considered in reference to its natural position and features, or the embellishments of art, there are but few places of equal beauty and interest. The mansion stands on elevated ground, but is flanked on the north and west by beautiful woods, which effectually screen it from the boreal blasts. The prospect to the south is delightful, embracing a view of the river and country on both sides, for the distance of nearly twenty miles.

The appearance of the grounds is highly attractive. On one side are extensive carriage ways and walks, leading for miles through groves and forests, and taking in their course points from which we have the finest park-like views; while on the other side, lie broad green fields, whose gently-varied surface presents to the eye a rich and extensive rural landscape.

The farm is divided into lots of from fifty to a hundred acres, and where a division of these lots becomes necessary, moveable iron fences are used, which, as they cannot be seen at a distance, preserve, unbroken, the view of the grounds. The soil is mostly a clay loam, more natural to the production of grass than grain. Gypsum operates favorably, and by the use of this article every year or two, and occasional top-dressings, with compost, a great portion of the farm is kept constantly in grass. A large field was shown us which had not been plowed for upwards of thirty years, and it had a stout crop of excellent quality. The herbage of the pastures is likewise much improved by moderate dressings of plaster. Hay is the principal product of the farm, of which it yields from 300 to 400 tons annually, mostly sent to the New-York market.

Considerable live-stock is, however, kept on the farm, and in this department Mr. K. has spared neither pains nor expense to obtain the best. We saw sixteen cows, full blood and grade Durhams, all of which were *good*, and several of them *uncommonly fine* both in points and dairy qualities. Among the herd was a very fine imported Ayrshire cow—"Kitty."[*] Mr. K. showed us some very promising young stock of various ages, and several yoke of staunch working oxen. A pair of nearly full blood Durhams were of large size, and apparently of great strength.

Mr. K. has a flock of about sixty South Down sheep, several of which he procured from the best flocks in England, at a cost, in some instances, of two hundred dollars per head. Many of them are of first rate quality, and show that they have been bred with care and judgment.

Mr. K. has shown great liberality in the distribution of such of his fine animals as he could spare, among the neighboring farmers, at prices not higher than would have been paid by the butchers.

The old out-buildings of the farm are in good order, but not in all cases of the most approved style. Mr. KELLY is erecting on different parts of the farm, several spacious barns for storing hay; and next season he designs to take down the barns where the cattle are kept, and put up others of the most convenient and substantial kind, in their stead.

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[*] This cow has since been purchased by E. P. PRENTICE, Esq

PARING AND BURNING.

Paring and burning the soil, as a means of increasing its productive powers, has seldom been practiced in this country. The reason may, perhaps, be, that in our older settled districts there is not a very large proportion of the kind of land which is most benefited by the process; while the cheapness of new lands has offered such inducements to improvement as tended to check expensive outlays on the old.

But we are satisfied that paring and burning may be practiced with good results in many situations, and that it would prove a profitable mode of improvement. The soils most suitable for this process, are those containing a large proportion of inert vegetable matter, combined more or less with clay. But on all soils overgrown with pernicious plants, paring and burning, if properly performed, may be successfully practiced. It not only effectually kills all living vegetation within two inches of the surface, but destroys the greater portion of the seeds which infest the soil. We have seen fields covered with couch-grass, (*Triticum repens*,) Johnswort, wild turnep, &c., rendered very clean for several years, and made to produce fine crops of grain, grass, or root-crops, by the course alluded to.

We find in a late number of the *Farmer's Magazine*, an excellent paper on the subject of paring and burning, the most important portions of which, with some additional suggestions, are condensed in the following article.

The method of paring and burning consists in paring with a spade or plow, the surface of any lands that are covered with a coarse and overgrown foggage or brushwood, into pieces not exceeding two inches in thickness, and afterwards drying and reducing them to ashes by burning. The operation is most conveniently performed by men with spades made for the purpose, which are formed with a thin blade of about one foot in length, terminating in a sharp point; and the left side of the blade is provided with an upright coulter, which cuts the slices in a straight line, and they are turned off to the right hand side by a twitch which the man gives to the implement. The handle or shaft is about seven feet in length, with a curved bend rising to the upper end, on which is placed a cross-hilt about two feet in length, by which the workman holds the implement and guides the process of cutting. The implement is so constructed that the spade lies nearly flat on the ground, when the hilt rests against the thighs of the workmen, which are guarded by boards or by pads of wool fastened on straps while he propels the implement through the tough surface.

Various kinds of implements to be worked with horses or oxen have been constructed for the purpose of paring the soil; but by none of them can the work be so effectually done as by manual labor, and there are but few situations where the hand plow would not on the whole, prove most advantageous.

The cost of paring and burning, varies according to the price of labor, and the condition of the land on which the operation is to be performed. The expense for paring alone, in England, is set down at an average of 20*s*. or about $5 per acre, and the cost of burning and spreading the ashes at the same sum. It will be seen, therefore, that it is only where land and produce are comparatively dear, that the process would prove remunerative. But in the vicinity of our large markets, it is by no means uncommon to incur a much greater expense per acre for manure alone, than would be required for paring and burning.

Paring may be done at any time from spring to autumn The turfs are exposed to the sun and air with the earth side up for a few days, and are then set on edge by bracing two pieces together. If the weather is favorable, the slices will soon be ready for heaping; which is performed by placing any combustible materials on the ground and piling the turf over them until a heap of moderate size is formed, when the fire is applied below. A smothering fire is much preferred, and the outside of the heaps should be kept so close that the flame does not burst out. In some cases the sods are piled in large heaps, and in others in small ones, only a few yards distant, but in either case the fire should be kept close. Small heaps, when the turf is so dry as to burn readily, incur less labor and expense both in piling and spreading the ashes. The quantity of ashes is on an average about 2,000, bushels per acre. In dry-seasons, and where the pared surface is light and fibrous, or covered with vegetation, the sods may be burned as they lie on the ground, without being heaped: and good pastures have been formed by sowing clover and grass seeds on the ashes, without plowing, where no useful grass or plant had before appeared.

After the sods are burned, the ashes are to be spread, and it is recommended to allow time for cooling them before the land is plowed, which is usually done with a thin furrow, and rendered fine by harrowing before the seed for a crop is sown. It is preferred to keep the ashes near the top of the ground, for the purpose of affording immediate nourishment to plants.

But though the immediate effects of paring and burning are generally admitted; the practice is opposed by many on the ground that it lessens the vegetable matters of the soil. This objection is answered by stating that it is not a destruction of the vegetable matter that is sought, but only a *charring* or torrefying of the materials exposed to the fire—violent burning being carefully avoided. In opposition to the opinion that the staple of lands is reduced by this operation, and that sterility ensues, may be quoted the authority of many of the most eminent cultivators, who burned the surface of their calcareous, silicious, and argillaceous soils in succession, and at no great intervals of time, and have always reaped great advantages, and never perceived any detriment, but a great improvement accrue to the land.

Green cropping with sheep feeding, was regularly followed, and dung and composts occasionally applied; and the land being thus improved was invariably laid down to rest with a sowing of good perennial seeds, and depastured for several years with sheep. On soils of better quality, the rest in grass would not be so necessary; but a duly enriching process of cropping must be adopted to afford the animal and vegetable matters to the soil on all improved and cultivated lands that contain the vegetable matter in a reduced and tender form, and in a finely blended and comminuted state.

The great advantage in burning consists in land producing by that process a manure for itself, and in producing crops for the future acquisition of that indispensable article. The opponents of burning nowhere give the system of cropping, and the future management of the land that is said to be reduced to a state of barrenness by that process, nor is there anywhere detailed a comparative and decisive proof of the inferiority of paring and burning to the mode of fallowing and rotting the surface on lands or fields of similar quality, and which have been subjected to the same treatment after improvement, nor the expense and produce of each mode from the breaking of the old turf till the land was laid out to grass. The great part of the controversy rests on mere matter of opinion, and a more fallacious mode of judgment cannot be adopted than to condemn any practice from the results of imperfect performance; for if strictly followed, it would condemn many of the most approved and useful practices in life; and anything that can be effected to good purpose by others, must not be disallowed by those who are incapable of the execution and unwilling to be taught; nor must they allow their avarice and prejudices, narrow judgment and want of energy and exertion to give a limit to the capacities of other men who may see more clearly and can act more vigorously, and who can bring more judgment and discrimination to bear on the point.

Scientific men have reasoned from very obscure causes in regard to the effects that result from paring and burning land; it is thought that clay imbibes nutritive properties from the atmosphere, and that carbonic acid, which in combination with iron is injurious to plants, is expelled by burning. But in the present state of our knowledge of these subjects, we may very properly refer the effects to a diminution of the coherence and tenacity of clay soils, and to the conversion of inert vegetable and other matters into active manures.

But the formation of charcoal may perhaps be reckoned the chief benefit, and some persons have added the oxygenation of the clay by the heat emitted, and also the mechanical effect of the fire in dividing and attenuating the soil; but as the process is above ground and of short duration, and the under-soil is unmoved much effect may not be produced that way. But it has ever been observed that vegetation is very luxuriant on the places where the heaps are burned, and where no ashes are allowed to remain on the ground. *There* the cause of fertility must arise from the effect of the fire; and the best ashes that could be found on a field have been carried and spread on pared ground where no ashes had been burnt, and they produced effects much inferior to those on the places where the burning had been performed and the ashes subsequently spread. It has been most judiciously observed that there is a cause or agent in burning, and that a most powerful one, "which escapes the retort of the chemist and the *rationale* of the theorist."

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

SUMMER APPLES.

A considerable number of new or newly introduced varieties of the apple have excited the attention of fruit growers, and to furnish the information which is often sought by those but little acquainted with them, we subjoin short descriptions of a number with a statement of their qualities. Figures, with full descriptions of some of the finest will be given during the season.

Garden Royal.—A roundish, even and regular, red striped apple, the stem slender, and calyx large and open, and both but slightly sunk. The flesh is very tender, of fine texture; moderately juicy, and of a very slightly sub-acid, pleasant flavor. It is not so rich as the Benoni, nor quite so acid,—is more regular in form, not quite so much of a yellowish cast, and duller in color. It promises to be a fine addition to our list of early apples. It is a native of Sudbury, Mass. Very productive.

Early Joe.—A figure and description of this excellent variety, was published in the Cultivator last autumn. It undoubtedly stands at the head of the list of all moderate sized mild-flavored apples. It is much smaller than Williams' Red,* but evidently superior to it in quality. In texture, it considerably resembles the Summer Rose. The growth of the young trees is slow—the tree a most abundant bearer, the branches being sometimes literally hid by the trusses of fruit, without diminishing its fairness or quality. Its origin was in East Bloomfield, in Western New-York.

Red Astrachan.—This very showy foreign apple, although it has attracted considerable attention, is only known to a limited extent. It is rather large, often quite large, roundish, slightly flattened and remotely conical, a fine deep brilliant red, with a slight bloom. It is a fine grower, good bearer, and ripens only a week or two after the Yellow Harvest. Were it of fine quality, it would therefore perhaps stand without a rival, but it is rather coarse in texture, and austere in flavor. It will doubtless prove valuable as a market fruit, where fine appearance often eclipses quality.

Early Buffington.—Apple medium in size, and ripening about the time of the Sine Qua Non, or two weeks after the Yellow Harvest. It is rarely equalled when well ripened, in its fine texture and excellent sub-acid flavor. It is flat, obscurely ribbed, with a short stem, skin very smooth, clear light yellow, often with a brownish blush; flesh yellowish white, very tender and delicate, and compact. It is decidedly superior in quality to the Yellow Harvest and Summer Rose, and and is perhaps only equalled by the Early Joe. It is however, a moderate bearer, which lessens its value. It is believed to have originated in the vicinity of Philadelphia.

Vedder's Pippin.—Medium in size, flat, somewhat ribbed, light greenish yellow in the shade, but nearly covered with bright red stripes, dots and clouds; stem short, thick, flesh white, delicate, profusely juicy, with a pleasant and excellent sub-acid flavor. Though not so rich in flavor as some, it is decidedly first rate in quality, and is an abundant bearer every alternate year. First brought to notice in Cayuga county, N. Y. It ripens near the end of summer.

Bevan's Favorite.—This apple was first described in Hoffy's Orchadist's Companion, a few years ago, and very highly commended; but it was either greatly over praised, or else is sadly degenerated in Western New-York. After three years' trial in bearing, we cannot place it higher than second rate. It is a very handsome red-striped apple, but only moderate in flavor, and too hard ever to be pleasant.

Remark.—Erroneous conclusions relative to the real merits of new varieties, are often drawn by those who receive specimens of the fruit from a distance. Those of mild flavor, as the Early Joe, Garden Royal, and Hawley, which often lose a part of their flavor by a conveyance of several hundred miles, are considerably diminished in excellence, and their real character thus remains unknown. On the other hand, those of the too acid flavor, as the St. Lawrence, Red Astrachan and others, are rather improved than injured by lessening their acidity.

(To be continued in next number.)

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*Generally regarded as one of the very best summer apples.

Experiments with Copperas on Sickly Foliage.

The day after the receipt of the Cultivator, which contained some statements relative to the beneficial effects of a solution of sulphate of iron, (copperas,) on morbidly yellow foliage, I made a preparation of the salt by dissolving 1 drachm in a gallon of rain water. I say *rain* water, for some hard waters, as lime stone water, will rapidly decompose the sulphate, and make the experiment less satisfactory. This solution I sprinkled over about fifty strawberry plants at one application; and the next day, and the day after, I applied the same amount to them, and waited for the result. Twelve days have now elapsed, and much of that period has been very rainy. The soil of the bed is composed of rotted chips, leached ashes which contained lime, and pig-pen manure. Soon after transplanting the vines, the leaves began to fade to a sickly yellow; some, indeed, became almost white, and some plants died. All these morbid effects I would have ascribed to the soil, had I not discovered that some plants left in a former bed of ordinary garden earth, where they last year were healthy, had assumed more or less of the same yellow hue.

A day or two after the last application of the solution, the ground became obviously of a yellowish brown color, from the decomposition of the sulphate of iron. The rains probably interfered much with any effects which the immediate application of the solution to the leaves may have otherwise had; at the same time that the copperas, (180 grains in all,) by those very rains was more likely to be washed down within reach of the roots, than in a dryer state of the atmosphere.

Again, I took up one of the worst plants which had not been treated with the solution; and after washing off all the soil from its roots, potted it in common garden soil. This case was a desperate one, for the plant had but six leaves, not half an inch long, and nearly white. Call this No. 1. Another plant, stunted and with yellow leaves, was dug up, washed, and placed in a solution of several grains of copperas, in two oz. of water, and left for four or five hours; and then common earth was added to absorb the solution, and in this slush it has been left till now. Call this No. 2. A third dwarf plant, with decidedly yellow leaves, was treated similarly, except that the soil added to the solution in which the roots were immersed, was taken from the strawberry bed in which the sickly plants grew. All these pots have been almost constantly drenched by the rains alluded to, and have had the benefit of but little sun; if, indeed, under the circumstances, the sun's strong rays would have been beneficial. Now for the results:

The fifty plants treated with the solution, have now, at the expiration of twelve days, assumed a considerably greener hue than those of the other half of the bed which were left untouched, for the purpose of comparison; and to determine whether any change which might take place in the experimental plants, might not be due to the coincidence of other agencies as the weather, or the recuperative powers of the plants. The difference in the two halves of the bed was very perceptible to three persons, who were not informed of my motive for requesting their judgment, until they had expressed it. Their judgment was not biassed.

In plant No. 1, now, after eight days, there is no striking change.

In No. 2, there was a decided improvement in five days, the leaves becoming of a lively green color, which they still retain.

The third plant has been but three or four days under trial; but it is now perceptibly improving in verdure.

I will remark, by the way, that a young walnut tree (Juglans nigra,) two young coffee bean trees, (Gymnocladus canadensis,) two Catawba grape vines, and one Elsinboro' grape vine, all of which were transplanted into the bed in which my sickly strawberries are, (except the walnut, which came up from a nut planted there,) are in a thrifty condition, while two or three Cassia marylandica plants, some parsley, onions, &c., transferred to the same bed, have some of them perished, while others remain stunted.

I shall continue my experiments as occasion calls for them, having received encouragement enough to do so, from the results of the foregoing trials with the solution of copperas. JNO. T. PLUMMER. *Richmond, Ind.*, 5 *Mo.* 22*nd*, 1848.

The Orchard—Renovation of old Trees.

MESSRS. EDITORS—Among the many visible improvements which are progressing with railroad speed, at the present time, the cultivation of improved varieties of fruit is beginning to be felt as a matter of growing importance. The *change* which has taken place in public feeling, in regard to this subject, is truly wonderful and agreeable. Let us look at the contrast which a few years furnish in this particular. Formerly apple orchards were scattered abundantly over the country, but what were their products? They yielded just such fruit as nature inclined them to yield. Not one tree in fifty, probably produced anything agreeable to the taste, while the stomach rose in utter rebellion, against their unsavory and sickening qualities. Consequently, public opinion in those days very nearly coincided with that of a certain squaw, who said "what fools Adam and Eve were to eat the apple from the forbidden tree! For her part she would much rather have it made into cider." Our apples, unpalatable to man, and almost obnoxious to beasts, were made into cider. Every cellar was furnished to overflowing with the article, and what could not be stowed at home, was taken to the distillery, and manufactured into brandy, a portion of which was returned and placed by the side of the cider casks for the future use of the farmer.

The temperance reform came, and a new and more cheerful feature was given to this state of things. Distilleries were seen going to ruin, because farmers would not furnish them with the raw material for the manufacture of *blue* ruin; and even distillers, many of them men of conscious integrity, saw the wrongfulness of manufacturing an article of such fatal consequences to the human race, were glad to close the fountains that poured out streams of liquid fire and death.

A serious difficulty arose, however, at this point of the passing state of things. The fruit was, for the most part of an inferior quality;—its value for stock had not been learned, and therefore could not be appreciated, and consequently, what trees existed, beyond the necessary number to furnish fruit for family use, were, in too many instances, deemed fit only for the wasting fire. Consequently, it was not unusual to see whole orchards nearly destroyed root and branch, to give the land to what was then considered, more valuable purposes.

Here our farmers committed an almost inexcusable error. Had they waited only a year or two, until the value of apples, both for stock and market, was fully determined, and then grafted these trees which were prematurely doomed to destruction, with choice varieties of fruit, they would not only have added an increased value to their estates by adopting a new means of increasing their "annual revenue," but have conferred a benefit upon others who would have become partakers of the luxury their fields afforded, almost too great to be appreciated.

The value of apples for domestic animals is being more and more appreciated. Horses, horned cattle, swine and geese, are all ready to test their excellence, as articles of food; and man finds in them a *healthful* and agreeable luxury. Their *value* increases with their excellency and keeping qualities. Of course, the very *best* varieties are the best to raise for every purpose.

It has become a prevailing opinion with some, that their orchards are *too old*, ever to experience any renovating influence, consequently; they are not worth grafting, and the only way for them is, to put out new trees and let the old ones pass away.

It is certainly a very good policy to set new orchards, and every farmer who has none but old trees, "the early settlers," should be about it with all diligence. But do not despise or neglect *the old trees*. If they have become scrubby in the top, prune with all care. If the bark has become rough and dry with age, scrape it, and if in doing this, you reach the *live bark*, no harm will result. If your orchard has long been in grass, and your convenience will permit, plow and manure, and raise one, two, or three crops of potatoes or corn. If it is not convenient to plow, make a compost of chip manure and common earth, and put a load of this under each tree. Or, if you saw your wood, or burn your chips, use the earth alone, and a good effect will result from it. Apply it as often as you can; if every year, the result will be better. In proof of the utility of doing this, we furnish the following facts:

In the autumn of 1837, in opening an excavation in search of iron ore, the laborers dumped the earth taken from the pit on descending land on which stood several apple trees. We saw them doing it, and looked upon those trees as killed, an anticipation which gave us but little uneasiness, as they had for several years been unproductive, or, if they have borne at all, the fruit was so small and knotty that it was deemed of little value. The carting and dumping process was continued until the earth (earth of no great vegetating power, as all must know who are conversant with the earths and ochres of an iron mine,) was raised around those trees to a height of from twelve to eighteen inches. Contrary to our wise calculations that those trees would die, in the spring of '38 they put forth a rich and beautiful foliage, and although not remarkable for their fruit, they gave a fine growth of wood that season. In '39 the trees were amply laden with fine, fair fruit, increased in size, and improved in quality, from the slight, insignificant productions of former years. These trees have continued annual bearers until the present time.

From this casual experiment, we took a hint, and have already resuscitated several old apparently worthless trees by the method we have prescribed. In '47, particularly, we experimented upon a tree which formerly produced a delicious, sweet, early apple, and, although we applied but one load of chip manure and common earth, mixed in about equal parts at the time of application, which was before the tree blossomed; The effect was surprising. The tree threw out many new shoots, and produced more apples than it had done for many successive years.

The rationale of scraping the old bark lies in this. It becomes dry and compact on the surface, and thereby hinders the expansion of internal parts, so that the sap circulates sluggishly, and hence the vital energy of the tree is checked so as to render it nearly worthless, if its destruction is not complete. This old bark may all be taken off with perfect safety to the inner layer, but in doing this, the greatest care should be used not to penetrate that in the least. After scraping the bark, wash the tree as you would a young tree, with ley, and in a few days you will see the bark assuming a youthful, vigorous appearance. If the wash be repeated often, no injury will result. It cleanses the bark from impurities, keeps the pores open and free, and effectually destroys all insects that seek shelter there.

Thus much for renovating old trees,—a thing to be desired until new ones can be raised in sufficient quantities to supply the increasing demands for fruit. But no farmer should place reliance upon them for a long period. Age will sweep them away at last, after all efforts to stay its progress. The next generation will need new and larger orchards. Every farmer, therefore, should set himself about raising a new orchard forthwith. We say *raising*, for in what way can a farmer get a hundred apple trees easier than to sow the seed, tend them, and graft them himself. The labor of this is trifling, and if he does it, he will be pretty sure to know what his trees are, whether they are grafted on whole roots or only *pieces of roots*, and can consequently determine much better whether his trees will be trees. He may also know with more certainty than can always be possessed, what the varieties of his trees are. This he may undoubtedly know in purchases from most of our nurseries, but mistakes sometimes occur in this as in other business, for more than once it has been our misfortune to purchase a tree bearing high recommendations, and doubtless valuable *somewhere*, which to us was utterly worthless. Soil or climate may have made a difference, but had we taken scions from some known valuable variety in our own neighborhood, our disappointment would have been remedied, our money saved, and our lost labor turned to good account. Y'rs respectfully, WM. BACON. *Elmwood, April*, 1848.

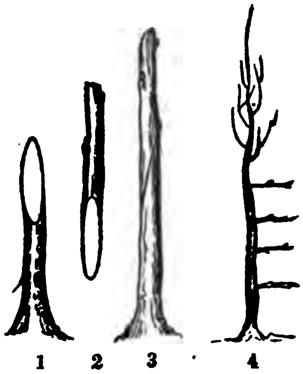
Experiments in Grafting.

Several correspondents have favored us with the results of their experiments in grafting, which we believe will be acceptable, in a condensed form, to many of our readers.

E. M. HOYT, of New-Haven, Vt., gives the following statement of a successful mode of raising a small nursery of apple trees for his own farm:—In the spring of the year, I enrich plentifully with manure a piece of ground near the house, so as to be often under my eye. I then proceed to the orchard or yard where my cattle have been after eating apples in autumn, where I find in their scattered manure apple plants in their second and third leaf. These are removed with the adhering manure and placed in rows. They grow vigorously and require careful weeding, particularly the first season. The second spring many may be grafted, but I usually wait till the third spring, when the plants are two years old.

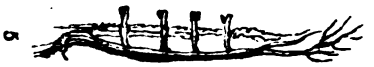
My grafting process is simple, and if well performed, sure of success.

Being provided with scions, procured in February from trees producing the varieties I desire, also with a quantity of strong brown paper, thinly coated with common grafting wax, the paper being cut into pieces, two by four inches, I cut off the tree obliquely, about 6 inches above the surface of the earth, thus leaving an opportunity in case of failure, to regraft below. I then select from the scions, with which I had previously provided myself, one of nearly a corresponding size, and take off about four inches, including at least two buds. This I match on to the stock, so that the bark of the two parts, shall generally come in contact, then holding them firmly pressed together, wind the paper-plaster around the splice with the wax side inward, drawing it very closely. This work should be done on a sunny day, so that the wax will adhere closely, as it is wound twice or thrice around. Rub a little extra wax around the tree, both on the upper and lower edges of the plaster, to exclude rain, &c. This plaster is all the ligature required as the union soon becomes perfect. After the scion sends forth its shoots, all starting sprouts below the splice, should be removed. As to the precise time for grafting, there seems to be some discrepancy of opinion; but I prefer that time when the buds are swelling. Still, I have met with success when the leaf began to develope itself.



The two parts should lap on each other about an inch and a quarter. That the shape of the splice may be understood by all, the annexed drawing is furnished; fig. 1, representing the stock; fig. 2, the scion; and fig. 3, the two united before the wax plaster is applied."

Grafting into layers.— The following mode, altho' not wholly new, in some cases may be found to possess advantages over other modes, where stocks may be scarce.



Take a stock of two or three years old from the seed, split it with a sharp pointed knife, about once in three or four inches; whittle off your scion wedge-shaped. and stick it at right angles through the stem. Apply wax and bandage, bend down the stock and confine it in a trench three or four inches deep; cover up with earth, leave one bud of the graft above the surface, and it is done. Three years since I first thought of and practiced this plan. Nearly all the scions took and grew finely. The spring following, I divided the stock with a sharp knife between each graft and let them stand. This spring I transplanted them, found them perfectly sound where they passed through the stock, and finely rooted. From 100 stocks, you can have from 300 to 400 thrifty grafts—quite a saving of labor and time. A. B. Price, M. D. *Boon Grove, Porter Co., Indiana, March*, 1848.

Fig. 4 shows the appearance of the stock and graft, and fig. 5 the same after the stock is bent down and laid in the earth.

Corrections.

In the last number of the Cultivator, an experiment is given in the interesting communication of our correspondent at Utica, where he attributes certain results to the *mixing* or crossing of the seed of beets and carrots.

The experience of scientific horticulturists has established certain limits to the power of crossing in plants. This process usually takes place between varieties of the same species, as one variety of the apple with another, or one melon with another. It also takes place, in some instances, between certain species of the same genus where they are *nearly allied*, producing a *hybrid*. Species widely different in nature are not capable of crossing. The pear and the apple, for instance, and the gooseberry and the currant, although species of the same respective genera, have never been known to intermix. Now, the carrot belongs to the natural order Umbelliferæ, and the beet to the natural order Chenopodea; they are not only of distinct genera, but of totally distinct natural orders; hence the ruin of the seed in the experiment alluded to must be ascribed to some other cause.

Our Flushing correspondent has fallen into quite an error, in classing the "seventeen year locust" among "visionary tales." This locust is at this moment swarming in myriads in a large part of western New-York, after a distinct interval of seventeen years; and we could, if necessary, furnish at least one hundred good certificates that this is the third appearance, after like intervals, in this part of the country. The fact cannot be overthrown, however difficult the explanation may be.

Time for Pruning Orchards.

D. Sinclair, jr., writes from Cape Island as follows:—"My objection to pruning in the winter is, the frosty winds dry and crack the wound; if delayed till May, the sap would keep it alive till grown over. I have for several years pursued the business of grafting in Canada and the States, and have seen trees that were pruned in the winter on the decay, while those of equal size pruned at another season, were healed. I use a moist and durable composition, bearing the changes of the weather, and will cover the wound until grown off. It consists of—

Beeswax,	1 lb.,
Tallow,	¾ lb.,
Rosin,	4½ lb.

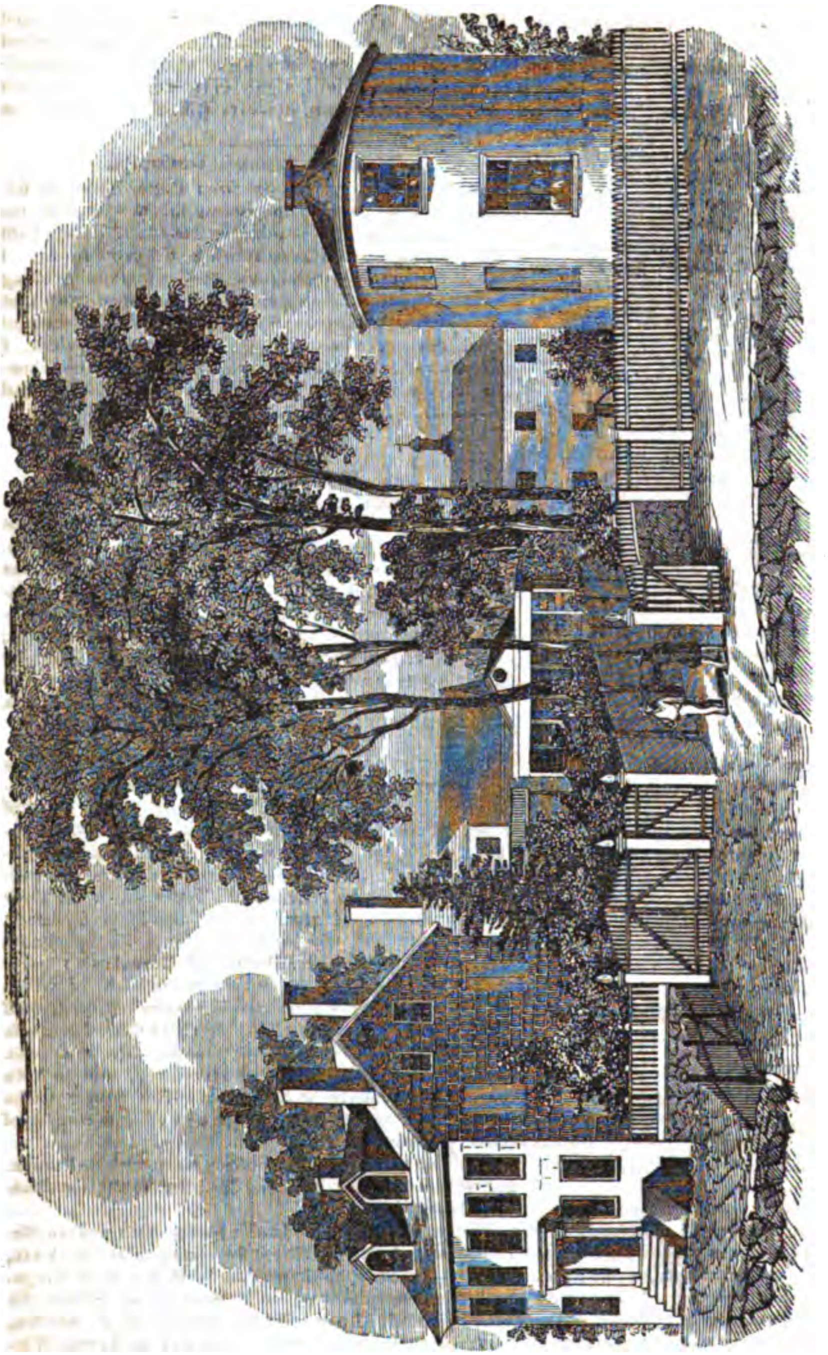
Early summer pruning would, doubtless, be advantageous in several respects, but it usually happens that it is a very busy season with nearly all cultivators. There appears, however, to be no objection to late winter pruning, if the wounds are protected by a suitable water-proof covering: a good and cheap one consists of a mixture of tar and brick dust applied warm; or a better and more expensive one may be made by dissolving as much gum shellac in alcohol as will make it of the consistance of paint, to be kept corked in a wide bottle and applied with a brush.

Horticultural Exhibtion.—The first exhibition (for the season) of the Albany and Rensselaer Horticultural Society, was held in Albany on the 14th of June. Considering the unfavorable nature of the weather, which for several weeks previous had been unseasonably cold, the display of fruits, flowers and vegetables, was highly creditable. There was a fair show of strawberries, of good quality; also of peas, beets, cauliflowers, (of the latter very superior specimens were presented by Mr. Douw, of Greenbush,) early cabbages, cucumbers, lettuce and rhubarb, of which Mr. James Wilson presented six stems of the *Hybrid* variety, weighing six pounds; Mr. Prentice six stems of the *Victoria*, weighing four pounds. Dr. Wendell presented a vegetable, called *Hooshung*, said to have been lately brought from China. The tender stems are eaten when cooked as asparagus. The display of roses, picotees, &c., was fine.

The premiums on strawberries were awarded to Mr. Douw for *Ross Phœnix*, and Mr. Prentice for *Bishop's Orange*.

The premiums on vegetables were awarded to Mr. Prentice, of Mount Hope, for *beets;* to D. T. Vail, of Troy, for early *cabbages;* to V. P. Douw, of Greenbush, for *cauliflowers;* to F. Kiesel, of Albany, for *celery;* to Mr. Douw, for *cucumbers;* to F. Kiesel, for *lettuce;* to Mr. Douw, for *peas;* to James Wilson, for *rhubarb*.

The premiums on flowers were awarded to Dr. H. Wendell, of Albany, for a *centre-table bouquet;* to Mr. Prentice, for a *bouquet;* to James Wilson, for a *flat bouquet*, and also to the same for a *round bouquet;* to Joel Rathbone, Esq., for two *basket bouquets;* to D. T. Vail, *for centre table bouquet;* to Wm. Newcombe, of Pittstown, for a *flat bouquet;* to John Wilcox, for a *floral design;* to Jas. Wilson, for best exhibition of *roses*, and to the same for the best twelve varieties, and the best six varieties of *roses;* to Joel Rathbone, for best six varieties and best three varieties of *pinks;* to V. P. Douw, for best collection of *pæonies;* and to J. Rathbone, for *fuschias*.



MOUNT AIRY AGRICULTURAL INSTITUTE.

JOHN WILKINSON, ESQ. PRINCIPAL.

GERMANTOWN, NEAR PHILADELPHIA.

It was announced in our number for February last, that Mr. Wilkinson, the Principal of the Duchess Agricultural Institute at Poughkeepsie, had made arrangements to remove his establishment to *Mount Airy*, the well known residence of the public spirited James Gowen, Esq., where the summer term of the Institute was opened on the first of April last. No better location could have been found for such an establishment; and we hope Mr. Wilkinson will find such an appreciation of the importance of his labors, on the part of the public, as will abundantly remunerate him for his devotion to the cause of Agricultural education. [See advertisement.]

Manure *in* or *on* the Soil.—J. P. Downey, before the N. Y. Farmers' Club, detailed the following experiment. Land was plowed nine inches deep and the manure spread in the bottom of each furrow during the operation. On another piece, the manure was spread after plowing and well harrowed in. On the ground where the manure was deeply buried, the corn was 20 per cent heavier.

This result is erroneously ascribed to the *ascent* of the buried manure. Manure nearly always remains in the soil just where it is put, except where the soluble parts are carried off by the currents of water beneath the surface, or where the volatile parts pass off by being too near or at the surface. In the above mentioned experiment, the roots of the corn extending several inches downwards, were conveniently fed by the manure buried in the furrow, while the rest of the crop only received the benefit of the surface manure while the plants were very young and the roots short.

A **Bale of Cotton** is 400 lbs., no matter how large or small the bundles may be in which it is taken to market.

THE FARMER'S NOTE BOOK.

Houses of Unburnt Brick.

I have lately been requested by many persons to write an article for the Cultivator on the construction of buildings of unburnt brick. I therefore send you the following, the result of my own experience.

In the summer of 1844, I purchased a piece of land for a nursery, and wishing to build a house to correspond with my business, I concluded to build of unburnt brick, several of the kind having already been erected in the vicinity, which had given good satisfaction. Mine has proved to be warm in winter and cool in summer. The walls are never damp, and there is every indication that it will be durable—more so, at least, than the *clap-board wind castles* which a person meets with every few rods, through the country.

My process for making the bricks was as follows: A circular pit, ten feet in diameter was dug, two feet deep. A floor of inch boards was laid over the bottom, and the pit filled with clay, and a small admixture of sand. Water was then added sufficient to moisten the batch. It is better to let the clay soak over night, if it is convenient, as I found it worked much easier. When all was prepared, a pair of oxen were driven into the pit, turned to the right, and driven about till the clay became soft and free from lumps. I then cut six bundles of straw, into lengths of about six inches, and scattered over the clay, keeping the oxen moving moderately at the same time, till the clay and straw were thoroughly mixed together.

I then placed a table, four feet square and three feet high, by the side of the pit, and with the help of a man, proceeded to mould the bricks. The moulds were made of pine boards, nailed together like a box, but made very smooth on the inside. The dimensions on the inside, were fifteen inches long, one foot wide, and six inches deep. Cleats were nailed on each side of the mould, to lift them by when filled. Two moulds were used alternately. The moulds were wet, sprinkled with sand, and placed upon the table. The clay was then shovelled from the pit and thrown upon the table. The clay was taken by the hands, filling the corners of the mould first—dashing it into the mould to make the bricks solid. When the moulds were full, they were stricken off even with the top, with a straight edge board to make them even. They were then placed upon a wheelbarrow and taken to the ground previously levelled and sanded, where the moulds were carefully inverted and lifted from the brick, leaving them to dry in the sun. As soon as the bricks became sufficiently hard they were turned on one edge, which exposed both sides to the air. They were afterwards placed in layers five feet high, under cover, till they were fit to be placed into the wall.

In laying them in the wall, I used clay mortar, mixed in the way as the clay for the bricks, omitting the cut straw. It is necessary in laying the foundations for buildings, to elevate them well above the ground, so that no moisture reaches the bricks from below, and no base should project to impede the running off of the water. I would here state that an aperture about a quarter of an inch wide should be left in each end of the bottom of the moulds, to admit air, as the bricks adhere, without such a precaution. The space could be left by making the bottom of the moulds too short to cover the whole length. The moulds should be washed as often as every third brick is moulded, on account of the soft clay adhering to the sides and bottom.

I offer my house for the examination of any laboring man. It is now covered to the eaves with roses in full bloom, and other climbing plants, forming an object of attraction to the passers by. Isaac Hildreth. *Seneca, June* 1, 1848.

Proper Stage of Cutting Wheat.

The proper time for cutting wheat is a subject which has been considerably discussed, and in regard to which there is probably still some difference of opinion. Many experiments have been made in England, in order to ascertain at what stage the crop would afford the greattest profit. The results all point to an earlier period than has formerly been thought best for this operation. Mr. Colman made very particular inquiries of the best farmers and millers in regard to this point. He states as the result of his inquiries, that "the best rule for harvesting, is not when the stalk below the head has changed color, and the circulations have consequently ceased, but when the grain, though it has ceased to yield any milk upon pressure, is yet soft." So far as trials have been made in this country, they are not at variance with the above, and some of our wheat raisers have now adopted the rule of beginning to harvest while the grain is *doughy*. The advantages of cutting at this stage have been briefly given as follows:—"Wheat cut early, affords more grain, yields less bran, makes better flour, shells less in harvesting, wastes less in gleaning, gives better straw, and enables the farmer to do the work more leisurely."

It may be interesting to notice with attention some of the experiments which have been made in cutting wheat at different times. In the 12th and 13th volumes of the Scottish Quarterly Journal of Agriculture, Mr. Hannam has given the details of several very particular and careful trials made under his own direction. In one instance he cut samples of wheat at five different times, as follows:

No. 1, was cut a month before fully ripe.
" 2, " three weeks " "
" 3, " two " " "
" 4, " two days " "
" 5, " when fully ripe.

Of these lots, 100 pounds of the grain of each yielded as follows:

No.	Flour.	Seconds.	Bran.
1	75 lbs.	7 lbs.	17 lbs.
2	76	7	16
3	80	5	13
4	77	7	14
5	72	11	15

Thus it appears that No. 3, which was cut two weeks before it was fully ripe, was superior to the other lots; giving more per bushel than No. 5, (cut when fully ripe) by 6½ pounds of flour, and a gain of about 15 per cent. on the flour of equal measure of grain: 100 pounds of wheat of No. 3, makes 80 pounds of flour, while 100 pounds of No. 5; yields 72; showing an average of 8 per cent. in favor of No. 3. In grinding, it was found that No. 5 ground the worst—worse than No. 1. There were in No. 5 a greater quantity of flinty particles, which would not pass the bolt than in any of the other lots. The bran from No. 5 was also much thicker and heavier than that of No. 3.

Mr. Hannam concludes, that in cutting wheat two weeks before it is fully ripe, there is a gain of fifteen per cent. of flour upon equal measures, a gain of 14 per cent in the weight of straw, and a gain of 7*s*. 6*d*. sterling in the value of every quarter (560 lbs.) of wheat.

Breeding Horses.

I have no desire for controversy, but there are a few points, involving important principles, in Mr. Burnet's second article on breeding horses, (current vol. *Cultivator*, p. 49,) which deserve notice.

Mr. Burnet remarks that "the most profitable horse to breed from is the one that offers the greatest certainty of producing a first-rate foal every year;" and it appears to be his opinion that such a horse can only be found among thorough-breds, for he says—"there really is but little certainty in breeding from any other than a thorough-bred stallion."

Thorough-bred, is a technical term applied exclusively to the race-horse, and presuming that Mr. Burnet uses the term in this sense, I confess myself at a loss to perceive the reasonableness of his assumption. Are blood-horses, as a breed, more uniform in their qualities and characteristics than all others? Compare them with the Norman, the Flanders, the English draught-horse, the Welsh, Scotch or Shetland ponies; Are "thorough-bred" horses more *alike* than these? And are the characteristics of "thorough-breds" more strikingly stamped on their progeny, by intermixture, than those of the breeds mentioned?

Is Mr. B.'s conclusion supported by authorities, or by observation, or even by his own reasoning? Mr. Burke, in his essay on the breeding and management of horses, published by the Royal Agricultural Society, (1845,) remarks, that those who have paid only a moderate share of attention to the subject of breeding, must be aware that there is perhaps no distinct breed of horses, "among which are to be found so many absolutely worthless animals, as among those that are thoroughbred."

But take the characteristic for which the thorough bred horse is most esteemed; that is, ability to run; and what is the "certainty" on this point? What proportion of thorough-breds are racers? Ask Mr. Botts of Virginia, or Col. Cost of New-York, or any other *experienced* breeder, and see what will be their testimony in regard to the "*certainty*" of breeding this description of horses.

Look at the great proportion of thorough-breds which become worthless from disease and from lameness, and which from various causes fail in training, and what are they? Read the remark of John Lawrence—"As to the refuse of our studs of race-horses, it consists usually of a parcel of half-gotten, delicate, weak, spider-legged creatures, which it is a misery to see applied to any labor whatever."*

But notwithstanding Mr. Burnet's position in regard to the "*certainty*" of breeding the right kind of stock from thorough-breds, he says—"it must be admitted that first-rate thorough-bred horses are so scarce in our country that it is difficult to procure their services." And further on we find the confession, that thorough-bred stallions in this country, have been "for the most part, little, gaunt, spindle-legged animals," which from various defects "have been sold for a song."

The English blood-horse has been in this country for many years, and in some sections, as parts of Virginia and Kentucky, he has, within the last fifty years, been bred in considerable numbers; while in some parts of New York, New Jersey and other states, he has been by no means rare. Why, then, with so much supposed "*certainty*" in breeding, are "*first-rate* thorough-bred horses" so "*scarce*," and poor ones so plenty that they can be bought for "a song?"

Mr. Burnet thinks that none but thorough-bred stallions should be used in breeding carriage-horses. It is unquestionably true that some thorough-bred horses, with the right kind of mares, have produced good carriage horses; but I presume no one will contend that any considerable number of the best of that class of horses in this country, have been thus bred; neither does it appear that this is the course pursued in breeding them in England. The Cleveland bays have there been much esteemed as carriage-horses, and we are informed by Youatt, that very celebrated carriage-horses, with "strength, activity and figure," have been bred by the Duke of Richmond "by crossing the Suffolk with one of his best hunters."

The saddle-horse, Mr. Burnet says, "should be at least three parts bred." Youatt admits the advantage of a *strain* of this blood for the saddle-horse and roadster; but at the same time adds, by way of cantion, that—"when approaching to thorough-bred he will be scarcely fitted for duty. His legs will be too slender; his feet too small; his stride too long; *and he will scarcely be able to trot*."

I will simply say in conclusion, that in my remarks about thorough-breds, I have had no reference to *individual* horses. Some of the stallions mentioned by Mr. Burnet I have not seen. I have seen Mr. Albott's *Consternation*, and think he is a good horse—better calculated to improve our stock for *useful* purposes than any blood-horse I have met with for a long time.—Equus.

Scotch & American Plows.

I am in hopes your correspondent W. may draw out some of your scientific men on the subject of the plow. How your northern plows do in the north *countries*, I do not know, but have no kind of doubt but they do well. In these parts they do not give entire satisfaction; the most of them "throw out," without any coulter; that is the beams are so low, that where there is litter or grass, the plow chokes, and is thrown out of the earth. I have some now, made by Ruggles, Nourse and Mason, that remedy this defect, they being some 13 to 14 inches high in the beam. I do not understand why our plows are made to turn so wide a furrow. I am fully aware that our planting community desire to do "a heap" of work with little labor.

Castings are not made heavy enough,—they may do for Yankee white folks, but as sure as "falling off a log," they will not do for southern "darkies."

To insure satisfaction in the use of the cast iron plow, I advise the castings to be made a little thicker, the points not quite so long or so wide, all cutting surfaces to be sharper than usual, and to be made as hard as a flint. There need not be much additional metal used, only to contract the width of furrow slice, say one-horse plow to 8 inches and a two-horse plow to 10. There are some soils where a one-horse plow will do at 9, but I would rather have 5 to 7½.

I have used cast Iron plows; that is, cast iron mould boards, points and shares, for several years. I am so well pleased with them that I shall continue.

My hands will break occasionally, but not compared to some of my friends, who declare they would not use the cast iron plow. I find, instead of paying 25 cts. to sharpen a share, and in two weeks more 25 cts. again and in two weeks more to pay $1.50 for laying, or probably not lay the first season, but to sharpen at least 3 or 4 times, costing 75 to 100 cts., that one or two points, worth 50 or 60 cts. will do equally well—and no lost time sending to shop. I have as many cast iron points and shares as I have wrought ones.—my cast iron has cost me say 50 cents each, with shares enough for 12 months more, whilst my wrought iron shares have cost me more than that in my own shop, only rating labor at 75 cts. per day.

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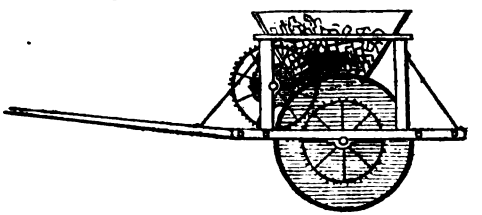
* Lawrence's Treatise on Horses, vol. 1, page 105.

If manufacturers wish to sell plows South, they must make their castings of the best iron; chill all wearing surfaces; make them higher in the beam, and plows to cost $5—this is price enough for a No. 1, one horse plow. Some lands want a mould board like the old Carey plow, standing up and bluff to their work, whilst others want only enough curve to let the earth fall over. M. W. Philips. *Edwards, Miss, April* 23.

Coal Grinder and Soil Presser.

Charcoal would have been better known and more extensively used as a fertilizer, if the expense and inconvenience of its application had been less. It has been sufficiently tested, however, to establish the fact, that it is one of the most useful applications to the greatest variety of soils, that has ever been known; it only remains for us to get up some cheap and expeditious way of powdering and applying it; for which purpose the machine represented in the above cut is intended. It shows a side view of a common roller for pressing the soil, with the addition of a small grooved cylinder so geared with the roller by the cog wheels represented, as to cause the surface of the roller to move much faster than that of the cylinder, thereby adding to the crushing movement, that of grinding, which together, pulverize the coal and drop it in front of the roller. By this operation the roller is dusted and kept free from the adhesion of any earth, and the coal is evenly distributed and pressed into the soil, so that the wind will not blow all the best of it away. Those who believe in applying charcoal to the surface after sowing, will see the utility of this machine. Dean. *Lyonsdale, N. Y., April* 22, 1848.



Value of Guano.

As a top dressing for grass, I have never yet found any thing superior to guano, especially directly after mowing or close pasturing. Spread broadcast from 250 to 500 lbs. per acre, according to the fertility of the soil; and if rain or heavy dew soon follows, the effect will be surprising. If the grass be cut or depastured early in the season, say by the last of June or fore part of July, I have repeatedly noticed that the guanoed patches produced as great a second growth as that of the first. This is a matter of no small consideration to those who have only a small quantity of land, and are desirous that it should yield the greatest possible product. Another consideration, guano gives the turf a greener and richer appearance than most kinds of manure; and will frequently bring in other highly nutritious grasses, which may not have made their appearance in the field for years before.

For Turneps, Guano is a very valuable manure, and has the merit of being extremely disagreeable to the fly. After the ground is prepared, spread the same quantity broadcast as upon grass, either before or after the turnep seed is sown, and then smooth over with a fine harrow, bush or roller, or with all three, as may be most convenient. Some prefer to apply only half the quantity of guano at the time of sowing the seed, and add the other half when the turnep plant is in its first leaf. They think this method a better guard against the fly, and that the guano proves equally beneficial.

For Corn.—At the last hoeing, apply a heaping table spoonful around each hill, about six inches from the stalks, and with the hoe mix it with the soil. It is very effectual in assisting the ears of corn to fill out well with grain; and it adds also somewhat to the growth and nutriment of the stalk.

For Wheat and Rye.—As a top dressing for these crops, at the time of or after sowing, guano has proved itself equal to the best of manures.

Strawberries and other fruits delight in guano. It increases the size of fruit of all kinds, and adds much to its delicacy and flavor.

For Various other Crops, Guano is highly recommended by our most experienced farmers and gardeners, when a large quick growth is desired.

It is upwards of twenty years since guano was first introduced into the United States, and for the past five years it has been very extensively used and highly approved of by the farmers and gardeners in the neighborhood of Boston, New-York, Philadelphia, Baltimore, Norfolk, Charleston and New-Orleans. A. B. Allen. *New-York, June* 13, 1848.

[For price of guano, which is quite low, see advertisement of A. B. Allen & Co., 189 & 191 Water St., New-York.]

Lightning Rods.

The electric fluid, whose passage through the air is commonly called a flash of lightning, has a stronger affinity for some substances than for others. This is easily shown with a common electrical machine; for having obtained a sufficient charge for our purpose, on presenting a rod of copper in one hand and a rod of glass in the other, at equal distances, the discharge will be found to take place on the copper and not on the glass one—hence we have what are called *conductors* and *non-conductors*. Electricity passes with greater or less facility, according as the object with which it is brought in contact, possesses affinity for the fluid—or according to its conducting power. Hence those things which stand low in the scale, or non-conductors, afford an almost impassable barrier to electricity, and are commonly shattered to pieces in its passage.

To apply these facts to the subject of protecting buildings by lightning rods: suppose a discharge about to take place in close proximity to a house on which is affixed a lightning rod; by reason of the attraction of the rod, the fluid is turned out of its course to the building, (which is a non-conductor,) and passes down the metal into the ground—leaving behind none of those fearful appearances which would otherwise have marked its passage. Here, then, we see that the greater the difference between the conducting power of the building and the material of which the rod is composed, the greater will be the protection secured.

Iron and copper are the metals which are found to answer the purpose best; and although copper is the most powerful conductor, yet by reason of its high price, compared with iron, the latter is commonly used.

The next thing to be considered is the dimensions of the rod. And first, as to length or height; suppose a rod twenty feet high, to be placed exactly perpendicular to the ground; then with a radius of forty feet, describe a circle whose centre shall be the spot penetrated by the rod. The diameter of this circle will be eighty feet.

Now each and every object within this circle, which does not project out of an imaginary line drawn from the top of the rod to the circumference of the circle, will be found to be fully and amply protected. The law may be said to be, that a lightning rod will protect everything placed within the circumference of a circle describing it, with a radius twice the perpendicular height of the rod. Therefore, in putting up a lightning rod, the perpendicular height of the rod, from the point where it ascends from the ridge, must be 1-4th the length of the ridge, that is, if it ascends from the ridge at the centre between the two ends. If the rod ascends from one end of the ridge, its height must be one-half the length of the ridge—unless another rod is provided for the other end, in which case each must project one-fourth the length of the ridge. From this it will be seen that the great point in relation to the length of the rod, is not the absolute length from one end to the other, but only the length measured from the tip to where it leaves the ridge of the building. The height of the building makes no difference—the extreme horizontal length of the ridge only, being taken into account.

The diameter, or thickness of the rod should be—if iron, three-fourths of an inch thick—if copper, half an inch. The reason that rods of this thickness are required, is, that they may not be melted by the most powerful discharges that occur. The end of the rod that is to project above the building, generally terminates in a fork of three prongs. Of this there is no necessity if *one* is *well* made. The only reason for having three points is, if one gets rusty, there is still another remaining bright. Now if one is constructed so that it will not get rusty, it is all that is required. The rod should be brought to a point, and perfectly capped with some metal not liable to oxydation. Platina, gold, and silver, are used—the two first are preferable to the last. The cap should be from an inch and a half to two inches in length and of the thickness of a sixpence.

The means of attaching the rod to the building, are various. The most effective and at the same time the most simple is glass. The object is to permanently attach the rod to the building with a non-conducting material. The mode of attachment is as follows: In all cities you may find what are called *glass spools;* Through the hole in the centre the rod passes. On the groove, on the outside, (where in a spool the cotton is wound,) is to be fitted a bolt, which may be readily driven into the building.

The different lengths of the rod should be rivetted together—being first fitted by shoulders. The bottom of the rod should terminate in two or three branches going off in a direction from the building, four or five feet under ground. The depth may vary, according to the nature of the soil—wet soils requiring less and dry ones a greater depth. JOHN J. HIGGINS.

Stones for Draining.

I have seen an article written by Prof. J. P. NORTON, on the subject of draining (Vol. v. No. 1, page 16,) where he remarks that stones may be used as a substitute for tiles or pipes; but quotes from Mr. SMITH of Deanston, that no stones should be used much larger than a hen's egg. Also, same vol. No. 5, p. 137, we have an account of Mr. PHINNEY'S mode of draining in which he applied stones, the size or weight of which is not mentioned. Now what I wish to ascertain of Mr. P. is, what sized stones he applied. The size of stones is a matter of much importance with me, for the following reason. On my farm of 60 acres, I presume there are not stones enough of the weight of one pound and less, to apply in draining one acre, and to pick them up one at a time, or to break larger ones, I think would be more expensive than pipes, even at eight cents a rod. Besides, stones of those weights are very little obstruction, as they may be easily crushed into the ground by passing the roller over them.

But stones from the weight of one pound to five or six pounds, are very plentiful—a great nuisance, and wall-layers say they are not fit to put into a wall. If, therefore, they will answer in draining, then the farmers of New-England may assume a two-fold advantage; first, of clearing the land of otherwise useless stones, and again have means within themselves whereby to drain their land—and advantages I think are an object worthy to be secured by all cultivators of New-England's sterile lands. A. W. DAY. *Colchester, Ct. May* 25.

To Farmers.—No. II.

The education of agriculturists is a subject much discussed in our own and other countries at the present day; and the question of establishing schools, particularly for this purpose, in connexion with which, it is proposed to have pattern farms, where young men may resort to learn the science of agriculture, is a subject often agitated, and much is said, and perhaps justly, in favor of such project. There are also professorships established in several of our older colleges for the like purposes, all of which efforts show that the public mind is becoming awakened to the subject of agricultural education. Yet we apprehend that these measure alone are not fully calculated to meet the entire wants of the mass of our farming population. A few of our more wealthy farmers may be able to spare the services of their sons at a proper age for them to attend, and have the ability to pay the expense attending the instruction in such institutions. Still, comparatively few could be expected to avail themselves of opportunities like these. Even if it was designed to support these schools at the expense of the State it would avail but little to the less wealthy and larger portion of our farmer's sons, for in most, if not all, of our public institutions, in addition to other difficulties, it requires some special influence to gain admittance to them. We would by no means object to the establishment of such schools, and while we most heartily hail the appointment of agricultural professors in our colleges, as a token of good to the farmer, we cannot believe these means of education will wholly accomplish the end designed, or that they are entirely adapted to confer the "greatest good to the greatest number." It appears to us, that in order to benefit the farming community, as such, the foundation must be laid in common schools. We cheerfully admit the value of what is now learned in these schools in other branches of knowledge to the farmer's child, as well as to the children of other portions of society; but we would not have his education stop here; we would have something particularly adapted to his wants. Let the first principles of agriculture there be taught, the advantage of mixing soils, the benefit of deep tillage of the land, of draining, the proper means of saving and applying manures, the analysis of soils, of grass, grains, roots, and other crops, together with the necessary cultivation to produce good crops. And he would better understand the means necessary to accomplish the end for which he labors. He would also be prepared to be benefitted by the reading of agricultural publications, and to profit by his own after experience, and any new discoveries in science, applicable to his calling. Much of value is now published in our agricultural papers, which but few of our farmers are prepared by their education to appreciate.

A short time since, on inquiring of one of our neighbors, a respectable farmer who has several sons, whether he took an agricultural paper, he replied, that he did not; and the reasons he gave for not doing so were, "that there were many things published in them that he thought was not correct, and much that he did not understand. and besides, (the old story,) he did not believe in book farming." It is probable, had he better understood their value, his opinion would have been somewhat changed, and his sons now growing up to manhood, might have had occasion to thank him for the perusal of an agricultural paper. Although the feeling manifested by our neighbor is in a measure done away, it still exists; and these publications do not yet find access to but a small proportion of the agricultural population of our country. If any person wishes evidence of this, let him attempt to obtain subscribers to even the best of these papers, and he will soon be convinced of the fact, that the circulation of these papers is quite limited in the most favored portions of our country. If the subject of agriculture was properly introduced and taught in our common schools, we should soon see an universal improvement in the agriculture of our country, and a great and increased demand for all those publications relating to it. Agricultural pursuits embrace a large part of our whole population; and our prospect as a nation, in a great degree, depends upon the intelligence and success of those engaged in these employments; and it is of vital interest to our country that the study of agriculture as a science, having so great a bearing on the welfare of this portion of our community, should no longer be neglected. ONEIDA.

Improvement of Stock.

This subject is growing in interest and importance from year to year, especially in those sections of our country better adapted to rearing cattle than raising grain. Much has been done already by our agricultural societies and individuals to improve our stock, and much remains yet to be done. It is the duty, as well as the interest, of every friend of agriculture, to do all he can to elevate the standard of this important branch of farming. I cheerfully grant that the efforts of the past have to some extent been crowned with success. But have not those improvements been too much confined to a certain class of our scientific farmers, whose rank and pecuniary circumstances will consistently admit of a large expenditure for such improvements. This appears from the fact, that the greater amount of premiums on stock awarded by agricultural societies, are to a Colonel A., Major B., the Hon. C., Esq., or Judge D., or some other personage of high rank and affluent circumstances; while the great mass of farmers are living on from year to year with but little or no improvement of their stock. Truly, such things ought not so to be. This is confining the benefits of such improvements within too narrow limits. Something more should be done to awaken the interest and attention of the agricultural community to this important subject, that *all* may in a few years have the privilege and satisfaction of looking around on their choicest specimens of improved stock.

One cause of this evil *may* be, that there is a want of interest among many in this particular. This may be remedied by a wider circulation of such valuable agricultural publications as the Cultivator, which cannot fail to create a laudable ambition, and to stimulate to activity every farmer who reads them. But the most prominent cause is, that many of our farmers, who may be more or less in debt for their farms, think they cannot afford to make such investments as are necessary to purchase those improved breeds of cattle so highly and justly recommended.

But how shall *this* be remedied? is a question more easily asked than answered. In looking over the May No. of the Cultivator, I noticed, in the communication of F. Holbrook, that the "Massachusetts Society for promoting agriculture," has hit upon a plan which I think would in a great measure remove this cause.

Of a truth this "Society has set us an example worthy of all imitation." If the agricultural society of this state, as well as the several county societies, would expend a portion of their funds in purchasing the best breeds, to be distributed for the improvement of stock, subject to such regulations as would benefit our farmers *generally*, we should see that a new impulse would be given to the agricultural interests of this State.

I am aware that this subject is an important one, and having with much diffidence submitted the above remarks for the consideration of the numerous readers of the Cultivator, I leave it, hoping to see it enlarged upon by those better qualified to do it justice. C. V. H. *Exeter, Otsego, May* 28, 1848.

Raising Wheat.

I do not propose to relate any account of raising *big* crops, which are few and far between in this section. Such are sometimes made the text for a communication from your correspondents, when the common method of farming is left out of sight. I take for my text, twenty bushels of wheat to the acre, which I think can be raised under ordinary circumstances, where wheat growing is an important branch of farming. There are here two dangers to contend with—the fly and rust. My crop, for the last year, consisted of 100 acres, which averaged as above stated, grown on land that had been seeded to timothy and clover two and three years. It was summer fallowed in May and June, plowed deep, sheep kept on through the summer. The first of August commenced harrowing the fallows across the furrows, and did it *thoroughly*. By the middle of August commenced cross-plowing in lands from six to eight paces wide, marked out straight and true; the centres of the lands form ditches to carry off the surplus water, and also serve as guides in sowing. The land remained from two to four weeks after plowing, before sowing, which I am sensible was a benefit to the crop. The seed was sowed on the furrows, so as to fall in drills; two bushels of seed per acre, and harrowed lengthwise of the furrows, which preserves the ditches and drills. The ditches were cleared out by running the plow through them; and cross ditches were made where the water would settle, so as to carry it off, and leave the ground free from it. Wheat will not grow where it is immersed in water.

My method of manuring, is to sow four to six quarts of clover and timothy seed per acre, immediately after harrowing in the wheat. Should the land be of a clayey nature, the seed should not be sown until the next spring. This is the cheapest manuring I have found, and it answers every purpose for raising wheat. On the sandy soil, I sow ¾ of a bushel of plaster per acre, in the month of May.

I commenced cutting wheat ten days before my neighbors, and as many days before it was fully ripe, which satisfied me that wheat is not generally cut in season.

But allow me to indulge my *organ* of prophecy: It is, that our wheat crop is gradually failing—falling before its natural enemies—the enemies that Nature produces, and which are growing in their strength, and the species greatly multiplying. The staff of life must come from some other production of Nature, for it is my prophecy that Omnipotence has decreed that these things will be so.

> "There is a divinity that shapes our ends,
> Rough-hew them as we will."

JAMES OTIS. *Berlin, Erie County, Ohio, February* 20, 1848.

[We are unable to discover any rational grounds for Mr. Otis' "prophecy." The increase of the "natural enemies" of the wheat crop, we do not regard as cause for great alarm. We must study the habits of those enemies, and be able to repulse, if not exterminate them. As good crops, (and even *better* ones,) are now produced on the Old Continent, by an improved system of husbandry, as were grown on the same lands a thousand years ago, notwithstanding the prevalence of insects, &c. EDS.]

The Estates of Gen. Washington.

As the subject of the purchase of Mount Vernon by the general Government is attracting attention, it may interest some of our readers to read a brief description of the estates of Gen. WASHINGTON, written by his own hand. These estates comprised over eight thousand acres of land, lying in the state of Virginia; of which the Mount Vernon premises constituted more than one-half. The remainder was divided into four farms, of from six hundred and fifty to twelve hundred acres each. In the year 1793, Gen. W., in a letter to ARTHUR YOUNG, proposed to lease the last mentioned farms to English or Scotch farmers, who might be disposed to emigrate to this country; the leases to run from seven to ten years, and the rent to be, (in the language of the proposition,) "*a Spanish milled dollar*, or other money current at the time, in this country, equivalent thereto, *for every acre of plowable or mowable ground*, within the enclosures of the respective farms."

The first part of the description, it will be seen, relates to the whole tract owned by Gen. W., including Mount Vernon, where he resided. The letter, from which we make the following extracts, is printed in the volume of "*Washington's Agricultural Correspondence*," published by FRANKLIN KNIGHT.

"No estate in United America," (writes Gen. W.,) "is more pleasantly situated than this. It lies in a high, dry and healthy country, three hundred miles by water from the sea, and on one of the finest rivers [the Potomac] in the world. Its margin is washed by more than ten miles of tide water; from the bed of which, and the innumerable coves, inlets, and small marshes, with which it abounds, an inexhaustible fund of rich mud may be drawn, as a manure, either to be used separately, or in a compost, according to the judgment of the farmer. It is situated in a latitude between the extremes of heat and cold, and is the same distance by land and water, with good roads and the best navigation (to and) from the Federal City, Alexandria and Georgetown; distant from the first, fifteen, from the second, nine, and from the last sixteen miles. The Federal City, in the year 1800, will become the seat of the General Government of the United States. It is increasing fast in buildings and consequence, and will, I have no doubt, from the advantages given to it by nature, and its proximity to a rich interior country, and the western territory, become the emporium of the United States.

"The soil of the tract of which I am speaking, is a good loam, more inclined, however, to clay than sand. From use, and I might add abuse, it is become more and more consolidated, and of course heavier to work. The greater part is a greyish clay; some part is a dark mould; a very little is inclined to sand, and scarcely any to stone. A husbandman would not wish to lay the farms more level than they are, and yet some of the fields, (but in no great degree,) are washed into gullies, from which all of them have not as yet been recovered.

"This river, which encompasses the land the distance above mentioned, is well supplied with various kinds of fish, at all seasons of the year; and in the spring with the greatest profusion of shad, herrings, bass, carp, perch, sturgeon, &c.; several valuable fisheries appertain to the estate; the whole shore, in short, is one entire fishery.

"There are, as you will see by the plan accompanying, four farms besides that at the mansion house. These four contain three thousand two hundred and sixty acres of cultivable land, to which some hundreds more adjoining, as may be seen, might be added, if a greater number should be required; but as they were never designed for, so neither can it be said they are calculated to suit, tenants of either the first or of the lower class, because those who have the strength and resources proportioned to farms of from five hundred to twelve hundred acres, (which these contain,) would hardly be contented to live in such houses as are thereon. * * * *

"I would let these four farms to four substantial farmers, of wealth and strength sufficient to cultivate them, and who would ensure to me the regular payments of the rents; and I would give them leases for seven or ten years, at the rate of a Spanish milled dollar, or other money current at the time in this country, equivalent thereto, for every acre of plowable or mowable ground, within the enclosures of the respective farms; and would allow the tenants, during that period, to take fuel and use timber from the woodland, to repair buildings, and to keep the fences in order until live fences could be substituted in place of dead ones; but in this case no sub-tenants would be allowed. * *

"Having said thus much, I am disposed to add further, that it would be in my power, and certainly it would be my inclination, (upon the principle above,) to accommodate the wealthy or the weak-handed farmer, (and upon reasonable terms,) with draught horses, and working mules and oxen; with cattle, sheep and hogs; and with such implements of husbandry, if they should not incline to bring them themselves, as are in use on the farms. On the four farms there are fifty-four draught-horses, twelve working mules, and a sufficiency of oxen broke to the yoke; the precise number I am unable this moment to ascertain, as they are comprehended in the aggregate of the neat cattle; of the latter, there are three hundred and seventeen; of sheep, six hundred and thirty-four; of hogs, many; but as these run pretty much at large in the woodland, (which is all under fence,) the number is uncertain. Many of the negroes, male and female, might be hired by the year as laborers, if this should be preferred to the importation of that class of people, but it deserves consideration—how far the mixing of whites and blacks together is advisable; especially where the former are entirely unacquainted with the latter."

Effects of Special Manures.

At a late meeting of the Council of the Royal Agricultural Society, Mr. LAWES made some interesting remarks in regard to effects of various manures on grain crops. He cited the results of many experiments which he had made on this subject. The chief effect of manure of any kind, he concludes, is to increase the quantity of grain and straw—the *quality* of the grain, or its weight per bushel, and the proportion of grain to straw having been about the same on the lots where manurer were used, and on those which had none. Great differences in the quality of the grain, and in the proportion of straw were, however, to be found in the produce of various years, and it was concluded that the effect of manure upon the quality of grain, and the proportion of grain to straw, was very small when compared to the effect of temperature and climate.

Mr. L. referred to the opinion generally held by chemists, that the nitrogen or nutritive elements of grain could be increased by supplying the soil with substances rich in nitrogen. He exhibited samples of grain, some of which were grown by means of mineral manures, and some by minerals with large quantities of ammoniacal salts. A sample, grown by superphosphate of lime, gave upon analysis 3.03 per cent of nitrogen; when ammonia was added, the per centage of nitrogen was only 2.65. Leibig's wheat manure, composed of mineral matter, gave 1.81 per cent of nitrogen, when ammoniacal salts were added, only 1.69 per cent. A sample of wheat grown in Australia, of remarkable fine quality, gave 1.94 per cent of nitrogen. Another, of indifferent wheat, grown on the borders of the Black Sea, and employed in making the finest description of maccaroni, gave 2.71 per cent of nitrogen. He remarked in conclusion, that while the *produce* is greatly increased by the employment of ammonia, it appears that the per centage of nitrogen in the grain is rather diminished. That under a proper temperature, starch is accumulated by the influence of ammonia, and that in general, those wheats which bear the highest price, are comparatively poor in nitrogenous compounds. This latter conclusion agrees with analyses made long ago. Davy showed that spring wheat and red wheats generally gave a larger per centage of nitrogen than the highest priced white wheats.

Sir **JOHN JOHNSTONE** stated before the Council, the results of some experiments he had made on a soil naturally good for wheat, which came into his hands in a foul and exhausted state. In reference to the value of Liebig's patent mineral manure, he had found it to produce the smallest results in comparison with the other artificial manures he had used along with it.

Professor **WAY** alluded in a highly complimentary manner to the valuable experiments conducted by Mr. **LAWES**, and the excellent papers he had written, which had been published in Journal of the Society. If he did not entirely agree with the views of Mr. L., he "felt convinced that he was pursuing a system of inquiry that must ultimately elicit the true principles of agricultural science." He thought the facts brought forward by Mr. L. were calculated to "encourage the agriculturist in all reasonable hopes of improvement, but at the same time to dissipate the illusory notion that he could at any time become independent of season and climate." In regard to the experiments with mineral manures, Professor W. thought they proved the impossibility of obtaining valuable agricultural results by the use of mineral substances alone, unless there were an abundance of matter in the soil capable of yielding the ammonia and carbonic acid necessary for vegetable growth. In regard to the failure of Liebig's manure, Professor W. considered that in "seeking to render the alkaline salts more permanently available to vegetation, the mark had been overshot, and that the manure was not sufficiently soluble for the wants of the crop to which it was applied; at least he judged so from a sample he had himself analyzed."

Animal Physiology.

An English periodical, in noticing Richardson's work on swine, lately published, gives a quotation in reference to the "points of a good pig," in which it is stated that the breast should be broad, as denoting "good room for the play of the lungs, and a consequent free and healthy circulation, essential to the thriving or fattening of any animal."

This, though a point upon which practical men are generally agreed, is contrary to the theory of some physiologists, viz: that animals, to fatten readily, should have *small lungs*. Prof. **PLAYFAIR** assumed, that if two pigs were taken, one of which had lungs of twice the size of the other, the one with the smallest lungs would make twice as much fat for the food consumed, as the one with the largest lungs.

So far as the observations of the writer have extended, this theory does not appear to be supported by facts. To obtain *positive* results, however, it is obvious that a series of close and thorough examinations and trials with various animals would be necessary. At the same time, it may be useful to give such facts as come within our reach.

In our April number, we noticed some fat animals which had been lately slaughtered in this city. We saw most of these animals before they were killed, and particularly noticed their forms and outward points generally. We also saw several of them dressed, and had the opportunity of examining their internal organs. Of the cattle, the most remarkable were the heifer, fattened by Mr. **McKOWN**, the twin oxen from Mr. **BASSETT**, and the calf from Mr. **WOOLFORD**. These were of extraordinary fatness, and it may be remarked that when an animal is fattened to so great a degree, the lungs become compressed by the accumulation of internal fat, and are, therefore, of less bulk than when the beast was in a more natural condition.

We took particular notes in regard to the appearances of those animals, but not having room at present for the details we will simply state, that in every case the heart and lungs corresponded to the external dimensions of the chest; and that the qualities of early maturity and fatness, were in proportion to the size of these organs; in other words, the fattest animals were those which had naturally the largest chests and largest heart and lungs.

Sheep in South Carolina.

Mr. B. F. **STANLEY**, who dates at Pliny P. O., S. C., wishes to obtain a Scotchman, who has been accustomed to the management of sheep, with the assistance of dogs. He says—"I have abundant opportunity for wintering 400 or 500 sheep, and ample range during the summer months; but the difficulty is their rambling off and being killed by dogs. I have seen sheep pass the whole winter here without being fed or receiving any attention whatever; they looked well in the spring. It is seldom we get up in the fall, more than half the number we turn out in the spring—at least so it is with me.

"I should like to employ a man, and give him a share in the profits of the sheep. I would prefer a single man, though one with a small family would not be objectionable. My place is not twenty-five miles from that portion of the Alleganies called the Blue Ridge. I can vouch for its exemption from the fevers of the cotton region."

Norman Horses.

MESSRS. EDITORS:—Allow me to confirm, from personal observation, the statements in the last Cultivator, of your correspondent "J. B. B." in regard to the merits of the Norman horse. I think, however, that they will average a larger size than that stated in the article alluded to. The following is an extract from notes made, when travelling in France, in 1845:

"From what I have seen of the horses in the northern and central departments of France—such as are used in the diligences—I consider them a superior breed of animals, and most of them are well made and handsome, with remarkably fine shoulders and quarters. One-fourth, perhaps, were inferior and wanted size; but take them as a whole, and the general average is better than the public coach horses of England. Englishmen themselves, will tell you this. The Norman horse is strong, surefooted, very true, with good wind and great power of endurance. They are also very docile and free from vice, as frequently five, seven or nine *stallions* are attached to one diligence, and they are so easily driven that a boy of twelve years of age might safely take the place of the coachman. The most common colors are roans and greys.

"The largest and heaviest of these animals are capital for slow draught, and also would make fine coach stock for the city; while the lighter weighted are well calculated for pleasure carriages and quick work. They possess many qualities in common with the Morgan, though of a larger size. They are the best horses I have seen in Europe for hard and fast work, as I have frequently known from five to seven, make nine miles per hour with the ponderous diligence filled with 20 passengers, and their luggage, besides a large quantity of merchandize, the whole said to weigh 10 or 11,000 pounds. In the Malle-poste they are frequently driven ten and eleven miles per hour."

I have often wondered that there were not more of this valuable breed of horses introduced into the United States. They would unquestionably improve our breeds, and as the horse for all-work, are better than the English blood stock. The few that have been introduced into this country have proved to be fine animals, for instance, the importation by Mr. Harris of N. Jersey, and the sire of the Morse Grey.

They could be purchased convenient for shipment, at Havre, and the best of them might be had for $200 or $250. A Maryland Subscriber. *Baltimore, June 5*, 1848.

Advantages of Water in Barn Yards.

By reading the able communications that have from time to time appeared in the Cultivator, I had formed a favorable opinion of the advantage of having running water in my cattle and sheep yards. Although I had a supply of water within ten or fifteen rods of my barn, I determined to fetch a spring that was situated nearly half a mile off; and I will now say, that after a trial of several months, it has more than realised my highest expectations. I am satisfied that I shall save at least one cart load of manure from every ox or cow that I feed in my yard, more than I did when they had to go to the river to drink. Then they would seldom go but once in a day, and in stormy or bad weather, not so often; consequently, when they did go, they would drink so much as to render them uncomfortable for several hours.

Now they will drink on an average about five times a day. I am satisfied that they will keep in better condition on less feed than formerly. I think that in the item of manure, it will pay the expense, to say nothing of the comfort of not being obliged to go ten or fifteen rods in cold and stormy weather to water horses; and it is often difficult when the ground is slippery, to get cattle to go a few rods to get their water. There are very many situations, where, with a trifling expense, persons could have water in their yards at all times; and I am satisfied, that if they once knew the advantages of this, and of having running water at their dwelling houses also, they would not do without it again for twice the cost. A small stream of good soft water will answer for a large family, and will save many a step and many a hard pull to draw it from a well.

Inquiry.—I think of paving my cattle stables with stone; also to form drains to convey the urine to a cistern, with the intention of using it to saturate the manure after it is thrown from the horse and cattle stables. What kind of cement would stand the water, the frost and the tread of the cattle? how made, and how used, and what would be the cost? A Subscriber. *Westchester County, March*, 1848.

Old Fashioned Theology.—The following remonstrance against mechanical improvement exhibits the light in which the first introduction of the fanning mill was viewed by some persons, at the time when sifting it in a current of wind was the only known way of expurgating the chaff:—

"Your Ladyship and the steward has been pleased to propose that my son Cuddie should work in the barn wi' a new fangled machine for dighting the corn from the chaff, thus impiously thwarting the will of Divine Providence, by raising wind for your ladyship's own particular use, by human art."

Notices of New Publications.

Chemical Technology; or Chemistry applied to the Arts and to Manufactures. By Dr. F. Knapp, Professor at the University of Giessen, translated and edited, with numerous notes and additions: By Dr. Edmund Ronalds, Lecturer on Chemistry at the Middlesex Hospital, and Dr Thomas Richardson, of Newcastle-on-Tyne. First American edition, with notes and additions, by Professor Walter R. Johnson, of Philadelphia.

This is one of the most valuable books that has lately been issued—valuable on account of the vast amount of information it contains relating to the useful arts. It consists of two general divisions, the first of which describes those branches of manufacture depending on the process of combustion, and the second the processes concerned in the production and application of the alkalies and earths. In the first chapter, the value and uses of different kinds of fuel in the production of heat, are considered at length, together with the various modes of heating and lighting buildings; modes of making illuminating gas; different kinds of lamps; making charcoal and coke, the production of tar, &c. Other portions of the work describe the processes of obtaining potashes, soda; the manufacture of soap in all its details; of various acids used in the arts; of gunpowder, gun cotton, salt petre or nitre, salt, &c. &c. The work contains 500 pages, octavo; is very handsomely printed, and contains upwards two hundred well executed engravings and illustrations. We shall have occasion to draw on the contents hereafter. Published by Lea & Blanchard, Philadelphia.

New System of Vegetable Physiology.—We have received a pamphlet with this title, written by Daniel Vaughan, Cincinnati. The chief design appears to be to show that the ascent and elaboration of sap, the conversion of humus into woody fibre, and the production of vegetable compounds generally, is affected by currents of electricity, aided by the agents light and heat. Some of the author's reasoning is certainly very plausible, though we have not sufficiently considered the subject to pronounce, positively, in regard to the theory advanced.

Self-Education: or, the Philosophy of Mental Improvement. By William Hosmer. Published by Wm. H. Ongley, Havana, N. Y.

The above is a duodecimo volume of 262 pages. It is a work well calculated to aid the mind in the acquirement of knowledge. The author appears to be familiar with the subject he has undertaken to illustrate, and has given many valuable ideas in a clear and perspicuous style. He considers education the acquirement of knowledge, which is valuable just in proportion to the importance of the things learned. We think the work will prove useful to a large portion of the youth of our country, whether they enjoy the benefit of schools and instructors, or are obliged to pursue unaided, the toilsome journey up the "hill of science."

Report of the Commissioner of Patents for 1847.—The report of Mr. Burke, Commissioner of Patents, for the last year, is a document which reflects credit on that officer, and the individuals from whom the valuable materials of which it is composed, were obtained. It forms a volume of 661 pages, comprising a greater amount of useful information than any previous report from this department. In addition to much statistical intelligence of a general nature, in regard to the products and trade of the country, there are several original papers on various subjects, drawn up with care and labor. Of this class we may mention the elaborate and valuable article on wool-growing and the management of sheep in Germany, by Mr.

Fleischmann; the culture of the grape, and the manufacture of wine in the United States, by Mr. Longworth; the hog crop of the United States, by Mr. Cist; and experiments in feeding hogs, by Mr. Ellsworth, (formerly Commissioner of Patents.) There is also much valuable matter relating to other subjects, which we cannot now particularly notice, but shall have occasion to refer to them in future.

Mr. Burke gives the following in regard to the amount of the different kinds of grain produced in the United States in 1847:

Breadstuffs.	Bushels.	Total bushels.
Indian corn, or maize,	539,350,000	
Wheat,	114,245,500	
Rye,	29,222,700	
Buckwheat,	11,673,500	
		694,491,700
Grain not used for breadstuffs.		
Oats,	167,867,000	
Barley,	5,649,950	
		173,516,950
		868,008,650
Other articles of food.		
Potatoes,	100,950,000	bushels.
Beans and peas,	50,000,000	do
Rice,	103,640,590	pounds.

Estimated population, 20,746,400.

Domestic Economy, Recipes, &c.

The Dandelion.

Dr. Holmes, of the *Maine Farmer*, says: The dandelion is valuable, both as an article of diet and as a medicine. "It is eagerly sought for by many as a very excellent plant for greens. A very wholesome and pleasant beer is made by substituting it (roots and all) for spruce. In medicine, it is considered an excellent tonic and corrector of any derangements of the functions of the liver, dyspepsia and chronic diseases of the digestive organs. It may be used for these purposes in two ways, viz: in decoction and in the form of an extract. For decoction, take, say root and herb, washed clean, half a pound; water, half a gallon; boil down to a pint. The dose from one to two wine glasses full once or twice per day. To make the extract, take fresh roots, bruise them, say a pound and a half; pure, soft, boiling water, two gallons; let it stand twenty-four hours; then boil down to a gallon, strain it while hot, and simmer it away gently to a thick waxy substance. Be careful not to burn it in the latter stage of the process. It should be a brown, bitter, aromatic substance, and easily dissolved in water. The dose of this is from ten grains to thirty grains."

Salting and Smoking Hams or Beef.—The peculiar flavor of the celebrated Westphalia hams is partly attributable to juniper berries having been put in the brine. Portugal hams and sausages are held in high estimation. "D. S. E.," in the *Agricultural Gazette*, states that the most simple method of preparing these hams, is to rub them daily with a proportion of bay and common salt. At the end of this time, with a brush, smear all over once or twice a small portion of pyroligneous acid, according to flavor, diluted with brine. In three or four days, hang it up to dry, or beef may be left in pickle. A small quantity of garlic is sometimes put in the pickle to give the flavor to such as like it. The same writer states that the far-famed Portugal sausages, called "lombo de porco," (loin of pork,) are made of the entire loins cut from the bones and rolled together, before being put into the skins; they are well soaked in a port wine brine. "The equally famous Samego hams, so called, though made all over the northern provinces of Portugal, are cured with sugar, which gives them that peculiar tenderness and delicacy, and the brine, (made of Port wine, sugar, salt, garlic and sweet herbs,) that peculiar flavor for which they are so renowned. Birch wood, myrtle, cistus, and other aromatic herbs, which abound all over the country, are used for smoking them."

Corn Meal Pudding.

Our correspondent Jethro, of Reclusa, Georgia, sends us the following receipt: "Seven spoonfuls of sugar, yolks of six eggs, beaten very light, with the addition of the whites, and cut it with a knife to a stiff froth; five spoonfuls of coarse meal stirred in lightly; to be baked brown and served with wine sauce."

Catching and destroying Rats.—We have on a previous occasion mentioned that the oil of rhodium and oil of anise, were sometimes used to attract rats. Professional rat catchers in England employ these substances in enticing rats to their traps. Dr. J. V. C. Smith, of Boston, lately stated at one of the agricultural meetings, that he had tried anise alone, and the rats came forward immediately while he was present. He stated also that ground plaster or gypsum, mixed with dry meal, will be eaten by rats, and that it will *set* in the stomach and kill them.

Peach leaves, and sometimes the kernels of peach stones, are used to flavor cakes and pies. They contain small quantities of prussic acid, and are often deleterious. A whole family were poisoned in Mississippi, one of whom died, by eating pies flavored with peach leaves.

Greasing Carriage Wheels.—The best composition that can be prepared to relieve carriage wheels and machinery from friction, is composed of hog's lard, wheat flour, and black lead (plumbago.) The lard is to be melted over a gentle fire, and the other ingredients—equal in weight—may be added, till the composition is brought to a consistence of common paste, without raising the heat near boiling point One trial of the paste will satisfy any one of its superior quality. *Ex. paper*.

HONOR TO THE TOILING HAND.

All honour to the toiling hand,
Or in the field or mine;
Or by the hissing steam machine,
Or on the heaving brine.
Whatever loom or barque, or plow,
Hath wrought to bless our land;
Or wrought around, above, below,
We owe the toiling hand.
Then honour—honour to the toiling hand.

In battles with the elements,
It breaks the stubborn sward;
It rings the forge,—the shuttle throws,—
And shapes the social board.
It conquers clime—it stems the wave,—
And bears from every strand
The sweetest, best of all we have,
Gifts of the toiling hand.
Then honour—honour to the toiling hand.

Productive Apple Tree.—Samuel C. Corwin, of Phelps, Ontario county, N. Y., has a tree of the Rhode Island Greening, which yielded 70 bushels in 1847, 65 of which were good and fit for market.

Irrigation in Mexico.—According to Humboldt, irrigated soils in Mexico often yield from 40 to 60 times the seed; 16 for 1 is reckoned a middling crop; and, taking the whole of Mexico, the mean produce may be estimated at from 22 to 25 for 1.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received, since our last, from Wm. R. Prince, Deane, J. T. Plummer, Charles Colby, A. W. Day, J. B. T., Hampden. Subscriber, Isaac Hildreth, C. V. H., A Maryland Subscriber, F. Emslee, One of your Subscribers, J. C. H., A. B. Allen.

Books, Pamphlets, &c., have been received, during the past month, as follows: "Knapp's Chemical Technology," vol I; from the Publishers, Lea & Blanchard, Philadelphia.——"Ewbank's Hydraulics and Mechanics," part VIII., from the Publishers, Greeley & McElrath, New-York.——Report of the Commissioner of the Patent Office, from the Commissioner, Hon. Edmund Burke, and D. Gold, Esq.——Seeds of a species of Clover, growing in the vicinity of the city of Mexico, from A. Phelps, Esq., New-Orleans.——Self-Education, or the Philosophy of Mental Improvement, by Wm. Hosmer. From W. H. Ongley, publishers, Havana, N. Y.

Hemlock Hedge or Screen.—In the garden of J. W. Wheeler, Esq., of Hyde Park, we lately saw a beautiful hedge, or screen, of hemlock, (*Abies canadensis.*) We had not previously seen this material used for such a purpose, but in this instance it has answered admirably. Mr. W. informed us that it had received no particular pains in its management. The young trees were taken from the woods when from 6 to 8 inches high, and set where they now stand; since which no attention, has been given except to keep, them sheared in the proper form. It is five years since the screen was planted, and it is about three and a half feet high, perfectly even, and so dense as to be wholly impenetrable to sight from the ground to the top. We would not be understood to recommend hemlock as a live fence against cattle, and we are not certain that it would answer against sheep, as they might check its growth by browsing, especially in the winter or early in the spring, when, in consequence of the scarcity of green forage, they will eat hemlock freely. But for a screen, in pleasure grounds or gardens, we have seen nothing which surpassed the one alluded to.

Sale of Short-Horned Cattle.—Mr. Prentice, of Mount Hope, has disposed of all his short-horned cattle to George Vail, Esq., of Troy. The lot consisted of twelve head, four of which were cows that Mr. P. reserved at his sale in 1845, and the others were young animals bred from them since that time. As the cows mentioned were those which Mr. P. selected especially for himself, from his former herd of about sixty head, it may well be supposed that they are of high value, and we may add that their offspring bid fair to equal them in the points and qualities which constitute first-rate short horns.

The circumstances which have induced Mr. Prentice to part with this stock are, briefly, the appropriation of his farm to purposes which render it impracticable to keep a breeding herd. The addition of these animals to Mr. Vail's former stock, puts him in possession of the largest and most distinguished herd of short horns in this section of the country; and as it is his intention to continue the breeding of them, persons seeking for choice animals of this highly esteemed breed, will here have the advantage of a wide range for selection.

We trust that Mr. Vail's success as a breeder will be proportionate to his enterprise, and indeed we believe that good animals of this breed will continue to command remunerative prices. At some of the late sales in England, quite as large sums have been obtained as this description of stock has generally brought in times past. We notice, for instance, that the remainder of the herd of short horns belonging to the estate of the late Earl Spencer, has just been disposed of at public sale. Eighty-eight animals were sold, and brought the enormous sum of £5,743.10*s.*, about $28,717. Sixteen bulls produced an average of £90, ($450,) each. One, "*Upstart*," sold for £210, ($1,050,) and another, "*Usurer*," for £420, ($2,100.)

Natural History.—We are indebted to Mr. Henry Jordan, for a copy of the doings of the "Natural History Department of the Brooklyn Institute," of the meeting held on the 18th of May. Interesting observations were made by several gentlemen, especially in reference to some department of entomology. Mr. Hooper observed, that lepidoptenous insects were separated into three grand divisions: "The butterfly, the moth, and the sphinx, and these three are again divided into various families and generations, and then into species. The greatest distinction between the moth and sphinx besides form, flight and food, consist in the form the larvæ of all the sphingii assumes, when a state of rest, resembling in figure the Egyptian sphinx holding on to the tree with its hinder feet, and raising its foreparts and curved neck, and hence its name.'

Mexican Clover.—We have received from Mr. A. Phelps, of New-Orleans, a few seeds of a kind of clover, said to have been found near the city of Mexico. Mr. P. thinks it is superior to any clover in the United States. The seeds have been sown, and if they vegetate, the plants will be fairly tried.

Farmer's Cabinet.—We learn from the June number of this paper, that its publication will be discontinued at close of the present volume, (next month,) and that arrangements have been made by which subscribers to the Cabinet will be supplied with the American Agriculturist in its stead.

Superior Materials for Painting.—We have received from Mr. Richard Dally, of New-York, samples of white lead and linseed oil, as prepared by him for painting. The mode of preparation was noticed in our number for January last. For further particulars see advertisement in this number.

Castor Oil.—A "Subscriber" wishes to obtain information in regard to what machinery, and the cost of the same, is necessary to express, without heat, the oil from the castor bean—the apparatus to be calculated for the manufacture of twenty to thirty barrels of oil per year. We shall feel under obligations to some person engaged in this business, if they will furnish the information desired.

Powdered Charcoal.—Mr. Charles Colby, of Meriden, New-Hampshire, states that he applied six bushels of charcoal, ground in a mill, to an acre of potatoes, putting it in the hill at the time of planting. He thinks it prevented the "rot." We have no doubt that charcoal is a good antiseptic, but it does not appear from Mr. Colby's account, that the preservation of his potatoes was owing to the application of this substance. To be sure, the potatoes were sound, and so they were in many instances where nothing was used; and we have often seen the "old tubers" as sound as his are represented to have been, where nothing but ordinary manure was applied. If he had put the charcoal in alternate rows only through the piece, leaving the rest untouched, the precise benefit of the charcoal might have been known.

Draining Pipes.—A correspondent at Paterson, N. J., informs us that the draining pipes, spoken of in our May number, are sold by W. K. Price, Middletown Point, Monmouth county, N. J., $16 per thousand pipes, each pipe a foot long. Two "flats," or soles, are necessary to each pipe, and these cost $2 to $4 per thousand; "so that 1000 feet of pipe drain will cost about 18 to 20 dollars."

Spruce Shingles.—Inquiry.—E. M. Hoyt, of New Haven, Vermont, asks: Can you or your contributors inform us how to render spruce shingles durable in a roof? Spruce is sawed into shingles in our mountain towns, and furnished to us at a low price. They rot, so that the roof becomes leaky in from seven to ten years, depending much upon the steepness. Have any experiments been tried of immersing them in oils, or other liquids, to add to their durability? If so, will you please communicate the results of such experiments, cost, &c.

Manufacture of Agricultural Implements.—The Boston Traveller notices the implement manufactory of Messrs. Prouty & Mears, in South Boston, Mass. An account of this establishment was given in the Cultivator for 1845, pp. 44, 45. We are glad to hear that the concern is still in a flourishing condition. The improvements of Messrs. P. & M. in the construction of the plow, and other implements, have been of great importance to the cause of agriculture.

A Good Horse.—A physician of Hampshire county, Massachusetts, thus describes one of his horses in the *Spirit of the Times:* "He is a chestnut sorrel with white snip, fourteen hands high, and seventeen years old this spring; came from Canada twelve years ago, and appears like a Morgan horse. Since he was broke, he has never been out to pasture a day; never been lame a day, or off his feet, and has travelled over these mountains, either to a heavy sulkey or a common buggy-wagon, over 120,000 miles. The owner says he has the "documents" to prove this, and that he is ready to back him to go a mile in three minutes any day when the roads are in fair order.

Fair and Plowing Match.—The Rochester *Daily Advertiser* furnishes an account of a fair and plowing match which took place at Avon, Livingston county, on the 27th of May last. Twelve teams engaged in the match, all of whom performed their work so perfectly, that it was difficult to tell who was entitled to the premiums. Large numbers of excellent oxen and steers, and several pair of fine horses, were exhibited. A large number of people, of both sexes, were in attendance. Great preparations are making for the *fall* fair, which is to take place at the same place on the 29th of September.

Appropriation of the Sales of Public Lands.—R. L. Colt, Esq., of Paterson, N. J., has petitioned Congress that a section of ten miles square of the public lands, shall be given to each state and territory of the United States, for the purpose of endowing an Agricultural College in each State.

Exports from the United States from July 1, 1846, to June 30, 1847.—According to a statement prepared at the Treasury Department, it appears that the exports from this country, within the dates above mentioned, were as follows:—Flour, 4,382,496 bbls.; Wheat, 4,399,951 bush.; Indian Corn, 16,326,050 bush.; Corn Meal, 948,062 bbls.; Rye flour, 48,982 bbls.; Ship bread, 160,980 bbls., and 31,082 kegs; Rye, oats, &c., value $1,600,962. Total value of the above articles, $53,262,457.

Death of Pines at the South.—The South Carolina papers speak of the death of pine trees in that section Immense numbers of them are said to have suddenly perished, and the cause has not yet been discovered.

Feeding Sheep.—The following are results of experiments recently made in Germany. The value of the Ruta baga compared with potatoes for sheep, is as 7 to 2; for the growth of wool merely, as 20 to 17.

Sheep kept without shelter, required more food than those in good ventilated sheds, as 30 is to 22; while the sheltered animals increased more rapidly in weight than the others, as 3 is to 1.

Precision.—In Kentucky, a "barrel" of corn is five bushels of the shelled grain. In New-Orleans, it is a flour barrel full of ears. A barrel of flour is seven quarters of a hundred weight, or 196 lbs. A barrel of tar is 20 gallons. A barrel of gunpowder is only a small keg holding 25 lbs. At Chicago, lime is sold by the barrel, where the smallest sized cask that is called a barrel, will pass muster.

Corn Crop.—The corn crop of the United States, according to the estimate of the Commissioners of patents, for 1847, was 540 million bushels—being about four times in value the whole production of cotton.

Eggs.—The egg trade of Cincinnati amounts to nearly three million dozen annually. One half are sent south—the rest consumed.

Excrements of Birds—The excrements of birds, both from the kidneys and the intestinal canal, are voided together; the dung, therefore, contains both phosphates and ammoniacal compounds, so essential in the formation of gluten and other nitrogenized matters of crops. It is only by both the solid and liquid excrements of animals, that the inorganized constituents of plants are represented. This is probably the reason why guano is so powerful a manure.

Analysis of Urine.—The following are analyses of the urine of cows and horses, the former made by M. Brande, and the latter by Fourcroy and Vauquelin:

Cows.—	Phosphate of lime,	3
	Muriates of potassa and ammonia,	15
	Sulphate of potassa,	6
	Carbonate of potassa and ammonia,	4
	Urea,	4
	Water,	65
		97
Horses.—	Carbonate of lime,	11
	" soda,	9
	Benzoate of soda,	24
	Muriate of potassa,	9
	Urea,	7
	Water and mucilage,	40
		100

Iron and Gallic Acid.—When a piece of iron is driven into a stick of green oak, a blue colored stain is frequently seen on the wood. This is caused by a union of the gallic acid of the oak with particles of iron. It is, in fact, genuine ink, and only needs to be combined with a little gum arabic to give it a body, to be used in writing.

Case-hardening Iron.—H. Webster gives the following account in the *Prairie Farmer*, of his mode of case-hardening iron, which he has found by twelve years experience to be superior.

Take one part of oxalic acid and two parts prussiate of potash; pulverize them together, and put them upon the iron when red hot—hold the iron in the fire to dry. If it is desired to harden very hard, repeat the operation several times. The iron does not need to be kept from the air, as by the old process of hardening.

The Horticulturist.—For prospectus of the 3d vol. of this work, see advertising pages. The first No. (for July) of the new vol., will be one of the most interesting yet published.

The Season and Crops.—April was quite dry, but in other respects was not unfavorable to vegetation; and the rains which set in with the first week of May, brought out more abundant and richer foliage than is usually seen. Grass and winter grain made a luxuriant growth, though the prevalence of cloudy and damp weather produced too much succulence of the stems to give the strength to support the grain in the best manner. The latter part of May, and fore part of June were remarkable for cold and moisture, as well as for very high winds. Frost occurred in many places on the first of June, and in some places on the thirteenth; though the injury by frost was less than that caused by the cold winds, which had a blighting effect on some tender fruits and plants. On the fifteenth of June, the weather became suddenly hot, the mercury ranging, for several days, from 88° to 96° in the shade. So great a degree of heat, with seasonable rains, has caused a rapid advance of all crops. Hay will be very heavy; winter wheat will be good, if it escapes rust, and has favorable weather to ripen; the same may be said of rye. Oats and barley look well; Indian corn is rather backward. In this vicinity, there is an entire destitution of peaches, plums, and fine cherries; but mid-way between this and New-York, cherries were abundant; and in New-Jersey, we hear peaches are plenty. Apples and pears are generally well set, though there is considerable appearance of blight on the trees, and many fine pears have nearly perished this season.

The wheat crop at the south and west is generally spoken of as good.

Hogs in the West.—The number of hogs slaughtered in the valley of the Mississippi last year is stated to have been 1,500,000, a fourth of which were put up for market in Cincinnati. The *bristles* from these hogs are estimated to be worth 50,000 dollars. Eleven millions of pounds of lard from them is calculated to have been run into lard oil. This oil is exported to the Atlantic cities, and to foreign countries. It is used in the Eastern States for the adulteration of sperm oil, and in France it is used to adulterate olive oil, the skill of the chemists being such that they are able to incorporate 65 to 70 per cent of the lard oil with that of the olive.

Good Farming in Ohio—A correspondent of the Ohio Cultivator, says: "I always plant my corn on a clover lay or stubble, and apply all the manure I can collect, which is no very small quantity, as I manure for no other crop. I do not pretend to know all about farming, but I do know that I raise about *one-third more* corn to the acre than I did 35 years ago, when I tilled the virgin soil, while I see the once fertile river bottoms falling off nearly one-half."

To destroy the Wire worm.—S. Davidson, of Greece, Monroe county, N. Y., states in the Genesee Farmer, that he successfully destroys the wire worm, and other insects, by covering the ground two or three inches with straw, where it remains two or three weeks to settle. During this time the worms work on the surface, under the straw. On a dry day the straw is burned, destroying worms and eggs. This remedy was applied to a part of a field, "full of wire worms." Where the fire went, there has been no appearance of wire worms; on the rest of the field they continued abundant.

Potato Disease—New Remedy.—Dr. Klotsch, of Berlin, is to receive 2000 thalers, (about $1,400,) for a new remedy for the potato disease. It consists, in substance, in pinching off the tips of the shoots, in the fifth, sixth, and seventh week after planting, when the plants are six to nine inches high. Only half an inch of the tips are removed, a greater portion is injurious. This causes an increase in the direction of the root, strengthens the leaves and stalks, while the action of the sun's rays is mitigated by the thickened foliage. Rows which were selected for experiment, were readily distinguished from the others, by their more numerous branches, and larger and darker foliage. Much success has attended this experiment, after various repetitions.

U. S. Crops.—The Commissioner of Patents says, the quantity of grain of all kinds exported during the year, ending Sept. 1, 1847, was 41 million bushels. Of this, about 20 million was wheat, 20 million corn, and the rest rye, barley and oats. The whole wheat crop, 114 million of bushels, and corn 540 million bushels.

Time for Budding.—As a general rule, the best time for this work, is when the bud has become fully matured or full grown, and when at the same time the bark of the stock will peel freely.

Chess.—A correspondent of the Ohio Cultivator, says, Go among the best wheat shocks at harvest, and select the largest and best ears for seed—sow the wheat on a piece of perfectly clean ground for seed another year. By this means, if proper care is used, "the seed will be quite clean, improved in quality, and will not *turn to chess*. I have tried this plan and have not had a spear of chess in the crop."

Rotation.—A good farmer in Ohio, who has rendered his farm richer, while others around him have been making theirs poorer, has adopted the following rotation:—

1st year, Corn, well manured after clover,
2d " Fallow,
3d " Wheat,
4th " Corn,
5th " Oats, with clover, then pasture 3 years.

Sweet Potatoes for Stock.—A writer in the Southern Cultivator, housed last fall, *two thousand bushels* of sweet potatoes from ten acres of ground. He used them for fattening his hogs, which were fed almost exclusively on boiled potatoes, and he says he never saw hogs thrive better. He also fed them cooked with turneps to working steers and milch cows with much success.

The Wool Market.—Samuel Lawrence, the greatest wool purchaser and manufacturer in the country, says, "the business of wool growing in this country, is destined to be of immense importance, and I am firm in the belief, that *within 25 years, we shall produce a greater quantity than any other nation*;" and he adds, "there is not enough annually raised in the country, by 10,000,000 to meet the demand of the manufacturers."

Profits of Draining and burnt Clay.—At an agricultural dinner at Robert Peel's, last autumn, —— Woodward, an eminent practical farmer, stated that some undrained land had come into his occupation, heavy land which only produced 10½ bushels of wheat to the acre—it was drained three feet deep, subsoiled, and dressed with burnt clay, and the first year he obtained from it 51 bushels He regarded the burning of clay as a most important practice, rendering the soil more friable and convertible, and worked with much less horse-labor—[and particularly applicable to heavy land.]

Culture of the Cranberry.—Sullivan Bates of Norfolk county, Mass., who has had very extensive experience with the cranberry, says, "As far as I have ascertained, there are three varieties of the cranberry, viz:—the Barberry, the Cherry, and the Bell. I have never known any other variety of the berry that would naturalize to dry soil, except the Bell cranberry; this grows much in the shape of an egg, it is inclined to grow in the wild state, on the borders of cranberry bogs, spreading its way to upland soil—it is much larger than the others in its wild state. He recommends to those desirous of successfully cultivating the cranberry, to try the plants on different soils of the same farm, to ascertain which is best—that which is best for the potato being usually suited to the cranberry. It becomes larger by cultivation—and yields from 150 to 400 bushels per acre.

Wash for Buildings.—The following composition is said to be not only protective against fire, but to render brick work impervious to water. Lime is slacked with hot water in a tub to keep in the steam. It is then passed, in a semi-fluid state, through a fine sieve. Take six quarts of this fine lime, and one quart of clean rock salt for each gallon of water, the salt to be dissolved by boiling, and the impurities to be skimmed off. To five gallons of this mixture of salt and lime, add one pound of alum, half a pound of copperas, three-fourths of a pound of potash added gradually, four quarts of fine sand, or hard wood ashes, and coloring matter to suit the intended purpose. It is applied with a brush. It looks as well as paint, and is as lasting as slate.

Artesian Wells.—The deepest boring in the world is at Mondorf, which is 2200 feet deep—and from which, in consequence of the progressive increase of heat in descending, every where found, the water is 95 degrees Fah. or nearly blood heat. The boring at Grenelle, Paris, is 1794 feet deep, and discharges 20 barrels per minute, with a force strong enough to rise 50 feet above the surface.

Old and New Clover Seed.—A correspondent of the American Farmer, says that clover seed at the second year has not lost its vegetating power, though from the increased hardness of the shell, it sprouts more slowly, a difficulty removed by soaking the seed 24 hours before sowing, in salt water, at 120 degrees Fah. and then rolling it in powdered lime or gypsum.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, June 16, 1848.

FLOUR—Genesee per bbl. $5.50*a*$5.75—Georgetown $6*a*$6.12½.

GRAIN.—Wheat, red, per bu., $115*a*$120 (dull)—Corn, northern, 56c.—Rye, 72c.—Barley 65*a*75c.—Oats, 42*a*43c.

BUTTER—Orange County, per lb., 18½*a*20c.—Western, dairy, 15*a*16 c.

CHEESE—per lb., 6½*a*7c.

BEEF—Mess, per bbl., $10.37*a*$10.50—Prime $6.

PORK—Mess, per bbl., $10.50—Prime, $8.

HAMS—Smoked Western, per lb., 5*a*9½c.

LARD—in kegs, per lb., 7½*a*8c.

HEMP—Russia clean, per ton, $230.—American dew-rotted, $130*a*$135.

HOPS—First sort, per lb., 5*a*7c.

COTTON—Upland and Florida, per lb., 4½*a*7c.—New Orleans and Alabama, 4½*a*8c.

WOOL—(Boston prices.) June 17.

Prime or Saxon fleeces, washed per lb........	42*a*45	cts.
American full blood fleeces,..................	38*a*40	"
" half blood do	30*a*32	"
" one-fourth blood and common,.....	28*a*29	"

There is no foreign demand for breadstuffs, and sales are dull at quotations. Wool is unsettled—the manufacturers are making but few purchases, in consequence of the influx of foreign cloths.

DURHAM CATTLE FOR SALE AT AUCTION.

THE subscriber having purchased of Mr. James Gowen, his numerous herd of Short Horn Durhams—the character of which is too well known to require comment—and being desirous of adopting, for the benefit of his pupils, a more general system of culture than is practical with the keeping of so large and increasing a stock of cattle, will sell some twelve or fourteen head, at public auction, on Wednesday, the 12th of July 1848, at the Rising Sun Hotel, on the Germantown road, near Philadelphia.

The stock to be sold will consist of Cows with calves by their sides, Cows in calf, all good aged—principally young One very fine bull, four years old. Yearling and two years Heifers, and bull and heifer calves from five to eight months old.

Descriptive Catalognes given at the sale, which will be positive and without reserve.

Mount Airy Agricultural Institute, *Germantown, May* 28th, 1848. } JOHN WILKINSON.

July 1—1t.

Answers to Inquiries.

Oyster Shell Lime—"Hampden," Mass.—This article is worth in Albany, six cents per bushel, fresh burnt.

Pear Trees.—"H." We are not apprised of any special advantages that would follow from taking pear trees at Rochester instead of Boston, for your location, unless *better* trees could be had at the former place.

Culture of the Blackberry.—"J. W. J.," Philadelphia. We have no better information in regard to the culture of the blackberry, than that given by "W. H." page 151, current volume.

Culture of Hoarhound.—J. B. T., Wayne Co., N. Y. Hoarhound is cultivated at the "herb establishments" in this vicinity. We are unable to state the amount of profits it yields per acre, or the mode of preparing for market. These facts could probably be obtained from the "United Brethren," called Shakers.

Red top Grass.—S. J. W., Murfreesboro' N. C. Red top is adapted to a moist soil, and we should think would suit the mountain region of North Carolina.

Influence of Brick-Yards on Fruit Trees.—R. D. T., Oswego. We are not aware that any new light has appeared in regard to the effect on trees of gases arising from brick yards. We see no reason to believe, however, that the ordinary blight of fruit trees has any connexion with that cause.

SALE OF STOCK AT BUFFALO.

I WILL sell at the State Cattle Show in September next, at Buffalo, about 30 thorough bred Short horns, consisting of cows, young bulls, heifers, and calves.

Also, 30 thoroughbred Durhams of like description.
Also, 30 " Cotswold Sheep, (long-wooled) ewes & rams.
30 " Southdown Sheep, (middle-wooled) of same sexes.

Catalogues and pedigrees of the stock will be on the show grounds where the animals will be exhibited.

The character of my stock is generally known—and I shall offer it all indiscriminately to the public, making no reservations for my own use.

Black Rock, June 13, 1848—2t. LEWIS F. ALLEN.

ANNUAL SALE OF BUCKS,

Near Delaware City, Delaware.

CLAYTON B. REYBOLD begs to inform the public, that he will offer for unreserved sale, at auction, on Wednesday, 2d of August next, Twenty-five Long-Wooled New Oxfordshire Yearling Bucks, which he believes *superior in all points* to those disposed of at his former sale.

The subscriber would also remind the public, that the New Oxfordshire Buck, which took the first prize for the best Long-wooled Sheep at the Saratoga Meeting, in the fall of 1847, is the sire of the Bucks intended for sale.

C. B. Reybold will be pleased to see any gentleman who will favor him with his company.

Sale to commence a 2 o'clock.

Marsh Mount, June 8th, 1848.—1t.

SCIONS FOR BUDDING,

At low prices,

FOR Sale by J. J. THOMAS, at his nursery in Macedon, including most of the varieties of apple, cherry and peach, *all proved by bearing*, at $2 to $5 per thousand buds, where quantities are taken, and an additional discount on large orders. Several new varieties of fruit furnished in smaller quantities at moderate rates. Bundles packed for sending by express, so as to keep fresh a week. Applicants stating the varieties and quantities wished, will be furnished with distinct prices All communications to be post-paid, and orders to be accompanied with remittances, or satisfactory references.

Address, J. J THOMAS, *Macedon, Wayne, Co., N. Y.*

July 1—2t.

IMPROVED STOCK FOR SALE.

THE subscriber will take orders and execute them in the best possible manner, for—

Durham, Hereford, Devon and Ayrshire cattle. Price from $50 to $300 each, according to age and quality.

Saxon, Merino, Southdown, Leicester, and Cotswold sheep. Price from $10 to $30 each.

China, Sussex, Berkshire, and Lincoln pigs. Price per pair at three months old for the three first mentioned breeds, caged and delivered on board ship, $20 Price of the Lincolns, $30 per pair. These last are of a recent importation—color white, and grow very large.

All orders must be accompanied with the cash.

SAMUEL ALLEN,
mjulysept. 189 Water-street, New-York.

DURABLE PAINTS.

RICHARD DALLY, Painter, No. 1 Burling Slip, New-York, has commenced the preparation of Paints and Oil for sale, with especial reference to durability. Twenty-three years experience enables him to adopt invariably, the only means by which permanence is secured. July 1—1t.

FARM FOR SALE AT A BARGAIN,

CONTAINING Two hundred and thirteen acres, six miles west of Batavia, Genesee county; one hundred and sixty acres under good improvement; balance about equally divided in good rail and hard timber, with good sugar orchard. Soil good for grain or grass. Three large barns with stabling attached for fifty horses.—Story and half house, kitchen and wood shed attached. Buildings all nearly new and in good condition. Ten per cent. down, the balance can remain on a long credit. For any further information, address, (post paid,) H. HUNTER, Rochester City, N. Y.

July 1—ju. & sept.

FOR SALE.

THE LINNÆAN BOTANIC GARDEN & NURSERY. Late of WM. PRINCE, deceased, *Flushing, L. I., near New-York.* WINTER & Co., Proprietors. In consequence of the decease of his Son and Partner, and of the advanced age of the Subscriber, he offers for sale this ancient and well known Nursery, densely stocked. Its location, celebrity for more than fifty years; established business; extensive variety of fruit and ornamental Trees, Shrubs and Plants, as well for immediate as future sales; stock of specimen Trees, &c., to propagate from; extensive greenhouses, dwellings, and other conveniences for conducting the business, all in high order; the beauty of the village, and its vicinity to the city of New York, with which there is communication several times a day by Steamer and Stages; afford very superior advantages to any person disposed to pursue the business.

The execution of Orders will be continued-Descriptive Catalogue *gratis* on application, *post paid.* GABRIEL WINTER.

July 1, 1848.—2t.

MOUNT AIRY AGRICULTURAL INSTITUTE.

THE subscriber having rented the MOUNT AIRY FARM, the late residence of James Gowen, Esq., with all its extensive and eligible appliances for the purposes of a *Farm School* removed his school, the Duchess Agricultural Institute of Duchess Co., N. Y., to the above place, where he opened for the summer term on the first Tuesday of April last.

The winter term will commence on the first Thursday of October. This farm, which is located on the Germantown road, 7 miles from Philadelphia, Pa., having been so long known as the model farm of the United States, the site being proverbially beautiful and healthful, a minute description is deemed unnecessary; suffice it to say, that it presents every inducement and desirable facility for the establishment and maintenance of an Experimental, Practical and Scientific Agricultural Institute.

The course of instruction will be such as to give the students every facility for acquiring a thorough knowledge of Scientific and Practical Agriculture, with the use of the best modern farm machinery and implements, together with a select farmer's library, including numerous Agricultural Periodicals. Instructions will also be given in all the collateral branches requisite to insure the great desideratum which it was the object of the founder and Principal to supply by an education commensurate with the exalted destinies of a landed interest.

Chemistry and the other Natural Sciences receive particular attention—lectures with full experimental illustrations being connected with each course. The Zoonic course will commence with the Horse, a perfect skeleton of which being provided for illustration.

The best facilities are also afforded, that those who desire may here acquire a Commercial Education, to the end that they may lay the foundation in youth of a future life that shall be agreeable, healthful and useful.

Fee for the year, $200, payable semi-annually in advance. This sum includes Tuition, Board, Washing, Fuel and Lights. An extra charge of $12 00 per annum will be made for pupils not furnishing their own bedding and toilet furniture. The modern languages $10 each extra per term, as also for drawing.

This Institution is under the patronage of the Amercan Agricultural Institute, the Farmer's Club of the American Institute, and the Duchess Agricultural Society.

For further particulars address JOHN WILKINSON,
Principal of the Mount Airy Agricultural Institute, Philadelphia, Pa.

REFERENCES.

Jas. Gowen, Esq. Philad., Pa.,
Robert Ewing, Esq., do.
Zebedee Cook, Esq., N. Y.,
Thos. McElrath, Esq., "
J. D. Williardon, Esq., "
Rev F A. Farley, Brooklyn,
Sam'l Allen, Esq, N. Y.,
G. A. Amaux, Esq
C. H. P. McLellan, Principal Po'keepsie Female Academy.
Geo. Vail, Esq, Troy, N Y.,
Benj P. Johnson, Esq., Albany.,
H. Weed, Esq., Newb'rgh, N. Y.,
Cha's. Bartlett, Principal Collegiate School, Poughkeepsie.,
Wm. A. Davies, pres't of Far. Manufac'rs B'k Poughkeepsie,
M. J. Myers, pre'st Merchant's Bank, Poughkeepsie,
Rev. H. G. Ludlow, Po'keepsie,
Rev. A. Polhemus, Hopewell, N Y
Rev. S. Mandeville, Lagrange, N. Y.,
Hon. Alfred Conkling, Auburn,
Robt. Farley, Esq. Boston, Mass
Wm. C. Gibbs, ex-governor of Rhode Island, Newport, R. I.,
G. W. Dobbin, Esq., Baltimore,
R. W. Crookshank, jr., St. John, New-Brunswick.

July 1—1t.

HORSE POWERS.

FARMERS in want of good Horse Powers and Threshing machines, will find them at the Albany Agricultural Warehouse and Seed Store. For description and recommendations, See Feb. No. of Albany Cultivator, for 1847 & 1848—also May No., 1848.

Descriptive Catalogue gratis.

SALE OF SHORT HORNED CATTLE.

I WILL Sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers, and young Bulls. A catalogue with their pedigrees will be ready at the time of the fair.

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and six South Down Rams.

References—A. B. ALLEN, N. York; SANFORD HOWARD and B. P. JOHNSON, Albany; FRANCIS ROTCH, Butternuts; and L. F. ALLEN, Black Rock. JOHN M. SHERWOOD.

Auburn, May 16, 1848.—4t

AMERICAN AGRICULTURAL WAREHOUSE AND SEED STORE.

S. C. HILLS & Co., No. 43, Fulton Street, (removed from 189 Water Street) offer for sale, Prouty's Ploughs and Horse Rakes, Mayher's and Moore's Ploughs, Corn Mills, Corn Shellers—Catchpole's very superior Stalk and Straw Cutters, Hovey's do. do., Grain Cradles, Churns, &c. &c. Also, Garden and Flower Seeds, raised by the Shakers, and warranted good; Fruit and Ornamental Trees and Shrubbery, supplied on short notice.

June 1, 1848.—3t

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen. H. L. EMERY.

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost. CLARK LEWIS, 2d.

German, Chenango Co., N. Y., April 15, 1848.

THE OLD MORGAN GIFFORD.

THE highest blooded Morgan Stallion, now remaining, will stand this season at the Stable of F. A. WIER, in Walpole, N. H.

Terms, $25, five dollars of which to be paid at the time of service, and the remaining $20 if the mare proves in foal. Pasturage furnished as usual.

FRED. A WIER.
ELISHA DEWOLF, Jr.
AMBROSE ARNOLD,
} Committee of the Proprietors.

June 1, 1848.—3t*

KINDERHOOK WOOL DEPOT.

THIS enterprise having met the expectations of its projectors, will be continued upon the following principles:

The Fleeces will be thrown into *sorts* according to *style* and *quality.*

A discrimination will be made between wool in good or bad condition.

All who desire it, can have their clips kept separate.

Sales will be made invariably for cash.

The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25c. on $100 for a term of three months.

Liberal advances in cash made on the usual terms.

Arrangements have been made with Manufacturers using different grades of wool, to purchase the various sorts at their market value soon after being received at the Depot. If the opening market price is not satisfactory, the wool will be offered for sale a such time as the owner may direct.

Reference can be had to

Dr. J. P. BEEKMAN, Kinderhook; D. S. CURTIS, Canaan;
C. W. HULL, New Lebanon; J. B. NOTT, Esq. Guilderland;
C. H. RICHMOND, Esq., Aurora; Col. J. MURDOCK, Wheatland, [N. Y.;
B. P. JOHNSON, Esq., Sec., N. Y. St. Ag. Soc. Albany.

H. BLANCHARD, Agent.

Kinderhook, N. Y., June 1, 1848.—3m

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

VALUABLE BOOKS

For sale at the Office of the Cultivator:

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c &c

F. A. GIFFORD.

Hudson, May 9, 1848—5t*

NORMAN or MORSE'S GRAY.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lansingburgh Norman is a beautiful dapple grey, 15¾ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from $150 to $500. The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms The horse will be under the charge of his former owner, Mr Morse *Terms*—$10 the season Insurance to be agreed upon. Communications addressed, I. T. GRANT P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.

16,000 IN ONE YEAR.

COLE'S American Veterinarian,

OR

DISEASES OF DOMESTIC ANIMALS.

A Book for every Farmer!

AND a book which every Farmer should own and may own, by paying the small sum of FIFTY CENTS, which may be the means of saving the life of many valuable animals, and from which he may derive a vast amount of the most valuable information in regard to the Training and Breeding of Animals, as well as full Rules for Restoring and Preserving Health.

16,000 COPIES

of this valuable work have been sold in ONE YEAR,—and we have testimonials enough in its favor, from those who have purchased and examined it, to fill a volume. We publish a few only.

"No Farmer's Library is complete without Mr. Cole's Treatise on the Diseases of Domestic Animals."

From William Bacon, Richmond.

This book is just what farmers want. The prescriptions are simple, always accessible, and harmless to the constitution.

From the Christian Herald, Newburyport.

It is truly "a book for every farmer." We have been most astonished at the amount of important information and instruction which it contains, on the training, breeding, and diseases of domestic animals. It is compiled by one of the best agricultural writers in the country, from his own experience and observation, as a practical farmer, and conductor of agricultural papers.

From Wright's Paper, Philadelphia.

"Cole's American Veterinarian," is an invaluable book. It is worth its weight in gold to any person having the care or charge of domestic animals. An agricultural friend, to whom we gave a copy, observed that it would save him a hundred dollars a year.

From the American Agriculturist.

The farmer will find much valuable information in this little work. By reference to its directions, they may be able to save a valuable animal, which otherwise might be lost.

From J. M Weeks, Vermont.

The American Veterinarian is the best book of the kind that I have ever seen.

From Levi Bartlett, New-Hampshire.

This book should be in the library of every farmer.

From the Farmer's Visitor, by Gov. Hill, N. H.

As the Editor of that excellent agricultural paper, the Boston Cultivator, and other kindred works, Mr. Cole has shown himself well qualified for the compilation of this work. We have known him for years, and he has proved himself to be one of the most persevering and able of our agricultural editors. We understand his new book has already had a free and extended sale. Many times its price to almost any farmer, may be saved in its purchase.

Published, and for sale at wholesale and retail, by

JOHN P. JEWETT & CO.
23 Cornhill, Boston.

100 agents could make money on this book in various sections of the country. None need apply except those who can command a small cash capital of from $25 to $50. Address, *post-paid*, the Publishers, 23 *Cornhill, Boston.*

For sale at the office of "THE CULTIVATOR." June 1—3t.

SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England.) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.

Troy, May 1st, 1848—4t.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction.

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers. E. J. BURRALL.

Geneva, April, 1848—6t.

ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings. A. R. HAIGHT.
March 1—6t*. 107 Fulton-st., New-York.

GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N. Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy.) can now, after treatment, see to walk alone, and see articles as small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

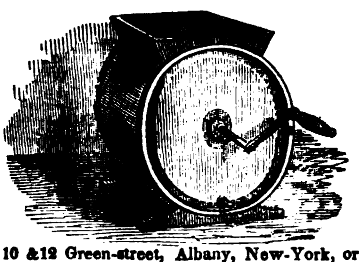
P. S. Fluid Cataracts removed without an operation.

April 1—4t.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,

May 1, 1848—6t. Cabotville, Mass.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos 10 &12 Green-street, Albany, New-York, or by mail.

June 1, 1848. H. L. EMERY.

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GUANO FOR SALE.

NOW landing from ship Aglare, a very superior cargo of Patagonian Guano. Price $35 per ton, for all quantities exceeding 1,000 lbs. Apply at the New-York Agricultural Warehouse and Seed Store, Nos. 189 & 191 Water-street, New-York.

July 1, 1848.—2t. A. B ALLEN & Co

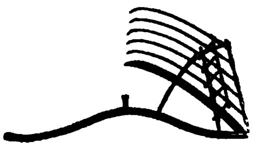
HAY AND HARVEST TOOLS AND MACHINES.

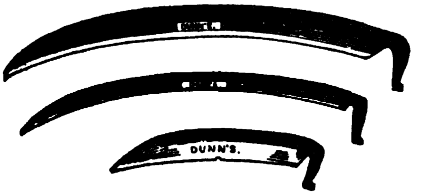
EVERY Farmer desiring good tools (and where is one who does not) should examine the large collection of the leading and best manufactures at the Albany Agricultural Warehouse Nos. 10 & 12 Green street, Albany—among which may be found,

Wilcox, Grants, & Myers & Bryans Cradles, the three best makers known.

Wilcox & Downer's Horse Rakes, all sizes; a better made article than ever sold here.

Dunn's, Phillips, Messer and Colby's Celebrated Scythes, of German. Shear Cast and Silver Steel; warranted the best kinds in use.





Lampson & Co's. & Clapp's Patent Scythe Snaths.
Dean's, McCollum's. Wakefield's and other hand rakes.
Real Quinnebaug. Cummington & Indian Pond Scythe Stones.
Nova Scotia and Ohio Grind Stones, all sizes
Grindstone Cranks, Rollers, &c
Austin's. Anson's Darby's and others, scythe rifles.
Grant's Fanning Mills, 4 sizes.

Partridge's Hay Forks, 6 sizes. Warranted not to break, and the best fork in America

Wheeler's Horse Powers and Threshers. These are too well known to need further notice here; except to refer to the February Nos. of the Cultivator, for 1847 and 1848, and to the May No 1848.

A full and complete assortment of all the above, and an extensive assortment of almost every article used on the farm or in the farm house, constantly on hand—making this Agricultural Warehouse literally an Agricultural museum, where a farmer can well spend an hour or two, and feel well paid for his trouble in calling. For prices, description, &c., see Catalogue Agricultural Warehouse, gratis at Store, or by mail. HORACE L. EMERY.

July 1, 1848.

THE HORTICULTURIST,
AND
Journal of Rural Art and Rural Taste.

Edited by A. J. DOWNING, Esq.

THE Third Volume of the Horticulturist commences on the first of July, 1848.

The Publisher, at the close of the 2d volume, desires to return his thanks for the handsome patronage bestowed on this work. It has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. Its influence on the progress of Gardening, and the information in matters of Rural Taste, is already strikingly apparent. Its extended and valuable correspondence, presents the experience of a large body of the most intelligent cultivators in America; and the instructive and agreeable articles from the pen of the Editor, make it equally sought after by even the general reader, interested in country life.

In order to introduce still greater improvements in the work, and especially in its illustrations, the publisher takes this method of presenting it in various parts of the United States, where it is not already known, and where he is confident that it only needs to be examined, or even announced, (such is the popularity of Mr. Downing's works,) to be at once ordered.

The work is published monthly in 8vo form, of 48 pages—each number accompanied by a frontispiece and several other engravings. The list of constant contributors embraces our first horticulturists and practical cultivators The "Foreign Notices" present a summary from all the leading Horticultural Journals of Europe; the "Domestic Notices," and "Answers to Correspondents," furnish copious hints to the novice in practical culture; and the numerous and beautiful illustrations —Plans for Cottages, Green-Houses, the Figures of New Fruits, Shrubs and plants, combine to render this one of the cheapest and most valuable works to country gentlemen on either side of the Atlantic.

NOTICES OF THE PRESS.

No one who loves the country will willingly be without Mr. Downing's Journal. In it he combines the merits of all his previous works. While informing the practical gardener as to his particular vocation, —the best sorts of garden fruits, vegetables, ornamental shrubbery, etc., and as to the best manner of cultivating each and all, he intersperses lessons of taste in rural architecture, of profit in rural economy, of knowledge at once useful and brilliant in botany, and of delight in all the branches of that most rational, independent, and healthful existence—life in the country.—*N. Y. Courier & Enquirer.*

The Editor of this attractive Journal has earned a wide renown by his elegant and most useful works on Landscape Gardening, Cottage Architecture, and Pomology. As an original and accomplished author in these attractive and popular pursuits, he has no rival since the death of the indefatigable Loudon; and his merits have been acknowledged by marks of high consideration from some of the crowned heads of the Old World.—*Sillimans' Journal.*

This magazine is printed and illustrated in beautiful style, at Albany. As to its character in other respects, it is sufficient to say that it is conducted by A. J. Downing, the most distinguished writer in the Union, on all topics connected with horticulture.—*Cincinnati Gazette.*

We strongly recommend this excellent and useful work to all who are attached to rural pursuits, either for amusement or for profit.—*Montreal Gazette.*

Every one at all ambitious of keeping up with the improvements of the day, in gardening, should subscribe for this Journal.—*New-Orleans Com. Times.*

We have found much pleasure in assuring ourselves of just what we anticipated of the work in such hands, a *desideratum* for the *advancing* taste of the country in horticulture and rural architecture, to which the work is chiefly devoted. No person, perhaps, combines more harmoniously the scientific and the practical than the originator of this work.—*New-York Observer.*

TERMS—Three Dollars per year—Two copies for Five Dollars. To Agents, a discount of 20 per cent. will be made. ☞ All payments to be made in advance, and orders to be post-paid.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany, N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

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PHILADELPHIA—G. B. Zieber & Co., Booksellers:
Of whom single numbers, or complete sets of the back volumes, can always be obtained.

☞ Advertisements inserted in the Cultivator, at the rate of $1 per 100 words, for each insertion.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, AUGUST, 1848. No. 8.

BRIEF SKETCHES OF FARMS, &C.

We had the pleasure, in June last, of visiting a portion of the fine country on the Hoosic river and its principal tributary, the Walloomsac. Few districts are naturally more fertile than this, and none are superior to it in picturesque scenery. It was first settled soon after the close of what is commonly called the "old French war,"—the war which commenced in 1756, between France and England, each supported by their respective American colonies. In passing to and from lakes George and Champlain, many of the English and New England officers and soldiers, became acquainted with this neighborhood, and being resolved to avail themselves of its agricultural resources, shortly afterwards took up their residence here. It has long been considered a very desirable farming section, and its rural population is distinguished for independent circumstances and good farm management. The farmers, generally, seem to appreciate their advantages, and have no disposition to change their location. Consequently there are but few farms for sale; and the lands, of average quality, are nominally held at forty to sixty dollars per acre.

SURFACE AND SOIL.—The surface is mostly hilly, and in parts mountainous—a portion of the Green Mountain range extending into the district—but the swells are large, and, except in a few instances, the slopes are so gradual as to admit of easy cultivation, and are not liable to be gullied or washed by rains. The soil is a loam mixed with the debris of slate, lime and trap rocks, and is very productive of the smaller grains, vegetables and grass. The alluvions, and some of the lighter hill-lands, produce large crops of Indian corn. Apples, pears plums and cherries, flourish in most places.

WOOL-GROWING.—But perhaps the most important product of the farms in this section is *wool*. Merino sheep were early introduced here, and at a later day, the late HENRY D. GROVE brought in some of the choicest animals of the best Saxon flocks, the blood of which has been disseminated in the vicinity, as well as other parts of the country, to the great improvement of the quality of the wool. The flocks of Messrs. ROGERS, HASWELL, and others, of Hoosick are well known. Mr. R. has lately disposed of his flock, of 1,000 head; he and his sons having purchased lands in Virginia, to which they are about to remove, where they intend to re-engage in wool-growing on a large scale, as soon as the requisite preparation can be made. We saw a portion of his flock with the wool, just taken off, and have seldom seen so large a number of fleeces of equal quality, and none that were put up in better order Mr. R. procured from Mr. PATTERSON, of Washington Co. Pa., about twenty rams, in the fall of 1844, and he thinks the cross from these has been of advantage to his flock—especially in imparting constitution and additional weight of fleece.

THE FARM OF JUDGE BALL—HIS LABORATORY, &c. Our stay in the neighborhood did not admit of our making particular examinations of many of the farms. We called on Hon. L. C. BALL, who accompanied us to Bennington and vicinity. First, however, we took a view of his own place, with which we were well pleased. His residence is at Hoosic Falls, where he settled in 1833. His farm originally consisted of 400 acres, for which he paid $25,000, and made an additional outlay of some $12,000 for improvements. All the buildings and fixtures were erected under his immediate supervision, and are planned and arranged with judgment and good taste, combining in a great degree the advantages of beauty and convenience.

For several years Judge BALL carried on the whole of his farm—keeping from five hundred to seven hundred sheep, thirty to forty head of fine cattle, and six to eight horses—the sales from the farm amounting to $2,000 to $3,900 per year. But ill health has lately compelled him to relinquish the management of so much business; and on this account he has sold off 300 acres of land, reserving a homestead and 100 acres, which still gives a handsome farm.

Judge B. has for the last year or two devoted his time with as much assiduity as his health would admit, to chemical and other scientific investigations. He has just fitted a very complete laboratory, where he is now engaged in analyses, having reference to agriculture and its kindred arts. To this laboratory the student of the Ball Seminary, an excellent institution in the vicinity, have access; and Judge BALL gives, also, occasional lectures on the sciences connected with agriculture, before the pupils. The management of the school by Mr. VEEDER, the Principal, is highly satisfactory, and with the chemical department, under the care of Judge B., as an auxiliary, we have great confidence in its usefulness in imparting sound practical instruction.

We made a short visit to the very interesting mineralogical cabinet of Mr. LYMAN WILDER, at Hoosic Falls. This is one of the most extensive collections of the kind in this country, and as an individual collection we believe it is exceeded by but few in the world. It comprises over 7,000 specimens of minerals, and their arrangement is on a plan, (original with Mr. W.,) which is at once curious and convenient.

In going to Bennington, we took the road leading up the valley of the Walloomsac. The farms along this stream are well cultivated, and for good buildings, fences, and neat appearance, are scarcely surpassed by any in the country. The stream, like the Hoosic, has many fine water privileges, several of which are occupied with establishments for the manufacture of cotton and woolen cloths, paper, &c.

Revolutionary reminiscence.—Judge Ball pointed out the ground, (over which we passed,) where the battle of Bennington was fought on the 16th of August, 1777. There were two engagements; the first being an attack and capture of an entrenchment of the British, by the Americans under Gen. Stark, and the second a rencontre between the same body of Americans and a detachment of Britons, who were marching to the relief of the other force. The latter battle was a mile or so from the first. The ground, in both cases, is on the New-York side of the line, in the town of Hoosic. On arriving at the Walloomsac House, in Bennington, we were quite surprised at finding the sword which belonged to Col. Baum, the officer who commanded the British forces on the occasion mentioned. It will be recollected that he was mortally wounded and taken prisoner in the battle. The interesting relic referred to, is the property of Mr. G. W. Robinson, who gave us the following history of it. When Col. Baum was carried off the field, his sword was taken by one of the men who assisted in that duty. This man afterwards sold it to Gen. David Robinson for two dollars, *Continental money*. The sword has since been kept in the family of Gen. R., and is, together with the scabbard, in a good state of preservation.

Manufactures.—The village of East Bennington is the seat of considerable manufacturing business. Iron ore abounds in the vicinity, and a company at this place makes 2,000 tons of iron per year. There is, also, a large quantity of yellow ochre, which is used in painting, obtained here. From 600 to 800 tons of this article are sold annually, at an average price of $18 per ton. But the most important description of manufactures carried on here, is that of crockery ware. The establishment is owned by Messrs. Lyman, Fenton and Park, and has been in operation four years. The ware consists of the following kinds: Yellow Fire-Proof, Dark Lustre, or Rockingham, and White Flint ware. All the varieties are of superior quality—said to be equal to any imported. The sales amount to $40,000 to $50,000 annnually. The materials used are mostly obtained in the vicinity of Bennington. The works employ forty hands, who were obtained from the Staffordshire potteries, England. Messrs. L., F. & P. have lately made some experiments in the manufacture of fine porcelain, which have succeeded well. Inexhaustible quantities of the principal materials required for this kind of ware, have been found, and it is in contemplation to embark extensively in its manufacture. A few more experiments will be made. in order to fully settle its practicability; when, should results be favorable, large works will be erected, and two or three hundred workmen employed. The mineral called feldspar, which constitutes the basis of porcelain, has been found in abundance in Ashfield and Goshen, Massachusetts, and has been pronounced by those acquainted with the article, equal to any in the world. The purest quartz is obtained at various points in the Green Mountains.

Hoosic Falls is likewise a considerable manufacturing place. There are two cotton factories, which employ about 1,000 hands. Messrs. Wilder and Parsons have here a large manufactory of machinery of differennt kinds. They make about $14,000 worth per year.

THE COTSWOLD BREED OF SHEEP.

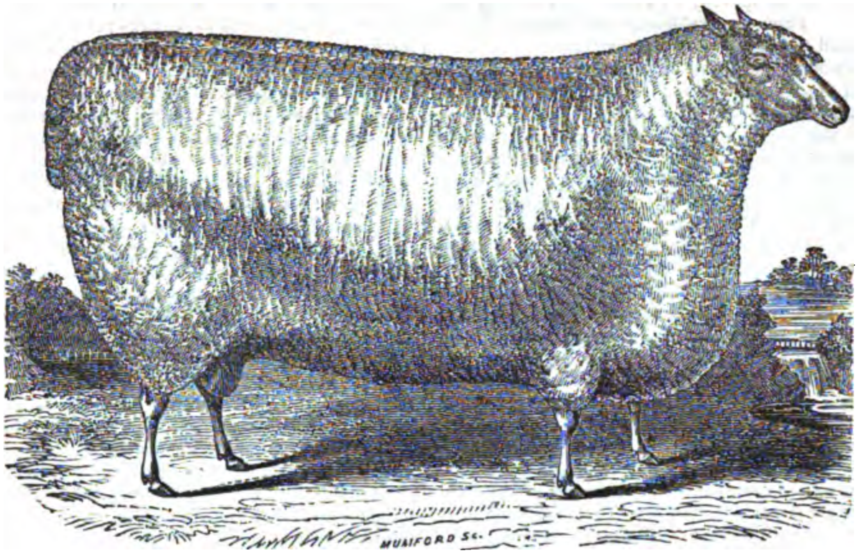
As this breed of sheep is now being disseminated to a considerable extent in various parts of this country, we have thought that a brief sketch in regard to their history would be read with interest.

The original stock from which the present *improved* Cotswolds were derived, has been known on the Cotswold hills, in Gloucestershire, England, for a great length of time. W. C. L. Martin, in his late work on sheep, (one of the series in "Knight's Farmer's Library,") gives an account of the breed, from which we give the following extracts. The name (Cotswold,) by which the breed is known, is said to have been derived from *cots* or *cotes* having been formerly erected in the district occupied by these sheep, for their accommodation. They consisted, we are informed, of "not only rude huts or sheds, but of extensive ranges of buildings, of three or four low stories, communicating with each other by means of gradually sloping ascents or pathways, so that the sheep had no difficulty in ascending to the topmost story. Thus no room was lost, and the most efficient shelter was provided for the flock either by day or by night, during the continuance of winter, or at the lambing season, or when it was deemed advisable to house."

The Cotswold breed, was, we are told, anciently held in such high estimation, that "in 1467, by permission of Edward IV, some of them were imported into Spain, not as some have supposed, to mingle with and improve the migratory fine and short-wooled Spanish sheep of ancient renown, but either to form the ground-work of a new long-wooled stock, or to improve some native long-wooled breed from which serge-like fabrics, requiring this kind of wool might be manufactured."

"The old Cotswolds were a large hardy race of sheep, big-boned and long-wooled, and well adapted for the hill range which constituted their stronghold. To judge from the relics still extant (though not pure,) they were flatsided, deficient in the forequarters, heavy in the hind quarters, slow fatteners, and covered with a long and weighty fleece; this latter being variable in quality, but always truly valuable as a combing wool. But the old breed is now more or less modified, and though it has not merged into the Leicester [or Bakewell breed,] is in many parts deeply imbued with the Leicester blood; in other parts, on the contrary, where hardiness is peculiarly essential, the cross of the Leicester has been only carried out so far as to give those improvements which we have more than once detailed, as the invariable result of even a single cross with this peculiar strain.

"According to the situation of his farm and the nature of his pasturage, does the Cotswold farmer manage his flock. Perhaps the prevalent breed may be half Cotswold and half Leicester. But in sheltered places and on good land, the strain of the Leicester may be found to predominate; while in more exposed situations the farmer, finding the Leicester cross tending not only to the diminution of the size of his sheep, and the weight of his fleeces, but to the loss of due hardiness and fertility, increases the Cotswold blood in his flock, and proceeds rather upon the principle of selection than of admixture to a rash extent, with the Leicesters. In both instances the farmer is right; in the one case, he has the means of feeding off rapidly, and he is content with the loss and a lessened weight of fleece; his profits arising from early maturity and from the capability of the land for feeding at a given time, more sheep of the crossed breed than the old, so as in reality, to return at a quick ratio a greater



New Oxfordshire Ram, imported by C. B. Reybold, Esq.

weight of mutton than formerly. To him wool is of secondary importance. The farmer whose land is exposed, and affords only a scanty pasturage, will find his profit rather in wool than in carcase; he could not, as respects the latter, compete, even if he would, with the farmer of the vale a few miles distant, but he will make up his profits in weight of wool. He therefore takes care that the old strain shall not prevail over the Leicester cross, (the benefits of which he is not altogether unwilling to lose,) and adapts his management to the circumstances in which he is placed. He does not lose sight of the fattening qualities and early maturity; but he as little loses sight of hardiness, fertility, and size, and of weight of fleece."

A breed which may, perhaps, be called a branch of the Cotswolds, has rather recently appeared in England, under the name of the "*New-Oxfordshires.*" They have been very successful competitors at the great shows of the Royal Society, and the Smithfield Club, for the prizes on "Long-wooled" sheep, as distinct from the Leicesters. One of the most celebrated breeders of this variety, is Mr. CHARLES LARGE, of Broadwell, Oxfordshire. From him Mr. C. B. REYBOLD of Delaware City, Del., obtained the two famous rams which he exhibited at the show of the N. Y. State Ag. Soc. at Saratoga, and the remarkable weight of which we mentioned in our April number.

Mr. ROBERT SMITH, in a prize essay on the breeding and management of sheep, (written for the Royal Agricultural Society,) thus describes the New-Oxfords:

"They are of large dimensions, and have a great propensity to fatten, arising chiefly from their wide frame, quietude, and open texture of flesh, which is of quick growth, and consequently expands itself more rapidly than many others; but they do not possess that exactness of form peculiar to smaller animals, though they have a better carriage. For several years the male animals have been eagerly sought after, with a view to increase the size and frame of other long-wooled breeds."

HOW IT CAN BE DONE.

EDS. CULTIVATOR—In the May number of the *Cultivator*, I noticed the remarks of Mr. Allen, with his very sensible request that the "Legislature of Connecticut, at their next session, would pass a law similar to the one in Massachusetts," for preventing animals from running at large in the highway. For Mr. Allen's sake, and for the comfort and convenience of all the good people of "the land of steady habits," we wish so too; and when we look at the fitness of the law, and its general influence on the well being of the farmer, we wish that it might be adopted by every state in the Union. Nor do we consider this wish vain, or one unlikely at some time to be realized.

The utility of such a law is unquestionable. It is the pledge of the public to guarantee individual rights in property, a portion of which is taken for public benefit. When a "highway is laid out," the only claim which the public make upon the premises, is the *right of travel and repair*. The right of soil with the grass and trees growing upon it, remain vested in the owner of the premises from whom the land is taken. This point is settled by common law of ancient date. Thus it is said: "Though every highway is said to be the King's, yet this must be understood so as that in every highway the King and his subjects may pass and repass at their pleasure."

"But the freehold, and all the profit of the trees, &c., belong to the lord of the soil, or the owner of the land on each side of the way." Also, "the lord of the soil shall have an action of trespass for digging the ground." See abridgment of common law, vol. 3, page 694. "Land covered by a highway may be recovered by a writ of ejectment," where the public abuse their right. Lord Mansfield in delivering the opinion of the court in a case of ejectment, says—"the King has nothing in an highway, but a passage for himself and his people, but the freehold and all the profits belong to the owner of the soil; so do all the trees upon it and mines under it, which may be extremely valuable." Mr. Justice Foster says—"the owner of the soil has *all above and un-*

der the ground, except only a passage for the King and his people." Thus far we quote the common law of England, and the opinions of her courts.

Judge Putnam, in giving the opinion of the court in the case of Stackpole & al vs. Healy, (vide Mass. Reports, vol. 16, pages 34, 35,) says—"I hold it to be clear that the public have no other right but that of passing and repassing; and that the title to the land, and all the profits to be derived from it, consistently with, and subject to the right of way, remain in the owner of the soil. The owner may maintain trespass for any injury to the soil, which is not incidental to the right of passage acquired by the people."

It is then given as the opinion of the court that "it is not lawful, therefore, for the public to put the cattle in the highway to graze. For whenever one would justify taking the property of another, in virtue of a license or a way, he must plead and prove that he used the way as a way, and not for any other purpose."—Judge P. then quotes the opinion of the English court as follows: If one drive a herd of cattle along the highway, where trees or wheat or any other kind of corn is growing, if one of the beasts take a parcel of the corn, if it be against the will of the driver he may well justify, for the law will intend that a man cannot govern them at all times as he would; *but if he permitted them &c., then it is otherwise.*"

Such then is the English common law in the matters of highways, and such are the opinions of her justices. Our statutes are in many instances very wisely based on those laws, and in accordance our learned chief justice Parker has given the opinion above cited. That such laws and such statutes are based on principles of strict justice to the public, who claim the right of way, and the individual through whose premises the way passes, cannot admit of a doubt. The public receive all they claim; all that can be of any service to them, in securing the right of travel and repair. They do not ask, as a public body, the right of pasturage, or of plowing and sowing or mowing. If they did, it would operate as an unequal right, which a part might enjoy, while others would have no oportunity or disposition to avail themselves of it. On the contrary, it is for the public convenience and public interest to leave this right of soil and its productions in the hands of the original proprietor, and further by good laws to protect him in that right. Where would the comfort or the safety of the traveller be, if all sorts of animals were allowed to run, indiscriminately, in our highways? Here, he might be exposed to the attack of a ferocious bull; there an unmanageable horse might blockade his path, and perhaps endanger his life. Many advocates of street pasturing, would no doubt say, keep *such* animals out, but let others run. But no. If our highways *are public pastures*, they have as good a right there as the innocent lamb. If they are pastures, they are pastures for every kind of farm stock. This is fully confirmed by the practice of the advocates of street feeding.

Street feeding is an encroachment on individual rights to an amount more than equivalent to all the benefits that can result from it. Many farmers would never on any consideration permit their animals to run at large. They choose, like thrifty men, to keep them in their own enclosures, where they are safe from the exposures to which animals running at large are liable, and where they are always sure to find them when needed. Such men are forever tormented by street cattle, which usually go in herds, and are forever picking quarrels with those in enclosures adjoining the highway—throwing down fences and teaching other cattle to do so, and fighting when the fences are down. Many a quiet and orderly stock has been made unruly, and of course of depreciated value, by evil associations with animals running at large.

But there are other wrongs to which individuals are subject, through this pernicious practice. Suppose for instance, (and it is a supposition which will hold good in a great majority of cases) that the farm of A. is situated so that a great proportion of his farm teaming is across the public way. In spring he wishes to haul his manure to fields opposite to his barns, one of two things must be done: the bars must be put up, or the gates opened and shut on each side of the way, every time he passes, or his fields must be trodden up by herds of marauders, wandering about like the prince of darkness "seeking whom they may devour." In summer, the season of busy cares, when earth is pouring her treasures into the storehouse and granary, the same scene of opening and shutting must be passed through again, only twice at each gate for every load of hay or grain that is moved to the barn. Now, is not this a pretty item of labor in the hurry of haying and harvest?—And does the public, for whose benefit the farmer's fields are cut in twain, demand it? No; they only ask "*the right of travel and repair*," all these ceremonies of labor and toil must be gone through with to gratify the lawless desire of a grasping individual. Let animals be expelled from the highway, and bars may be out and gates open for the prosecution of the business of the farm from morning till night, or from spring to autumn, with nothing to molest or make afraid for the safety to crops. And now, brother farmers, we leave it for you to say whether such a state of things is desirable in the prosecution of your daily employments.—For ourselves, we have lived under the dispensation of cattle going at large, and now live under the brighter one of having them enclosed, and found the difference in favor of the latter too great for our expression. *Try it*, and you will say likewise, and your neighbors who may not at the first like it so well, will, after a fair trial, give a response to your sentiments.

But to the text—How it can be done? In the first place get a draft of the law of Massachusetts in this matter. It is as perfect as a law can be, and so plain that a fool cannot mistake its meaning, (though perverse and obstinate men may sometimes give it a perverse translation) and send petitions, many or few as circumstances may permit, to your legislature, and ask that a statute in its very letter may be entered upon your own book. If they refuse to do this, give them leave *to stay at home as unfaithful servants of the people, in all future time, as the reward of their short comings in protecting the people's rights*, and try again, and continue *to try* until the thing is accomplished. It will soon be done, and in the end will compensate in more than a hundred fold for all the labor its accomplishment will cost. Get such a law passed, we say, farmers, for ye are the people and can do it, in every state in the union, and you will realize in one particular, the pleasure of sitting under your "own vine and fig-tree," and will entail a protective statute on posterity, of more value to them than all the protective tariffs that a nation of Congresses ever would impose. W. BACON. *Elmwood, July* 1848.

KILLING ANIMALS IN THE NIGHT.—DUMAS states that animals killed towards the middle of the night furnish meats which are more readily preserved, than do those which are slaughtered in the day-time. This seems to indicate that the meat most suitable for preservation, is that which is taken from the animal when its respiration is least developed, and its temperature is at the lowest point. The flesh of animals when killed after a long run is unfit for keeping, and this is considered a proof that a quickened respiration and a highly developed temperature are conditions unfavorable to its preservation.

NEW PATENT CLEVIS.

Messrs. Editors—Permit me, through the medium of the Cultivator, to introduce to notice an improved clevis with a few remarks on the draft of that most important implement, the Plow.

Although the plow is one of the most common implements, it is not using too strong language to say it is at the same time the most complicated of all farming tools and machines, and whoever is capable of making a plow-pattern of good form and proportion, as to its strength, weight, draft, and which is effectual in its operation, is no ordinary mechanic.

Again, after the pattern-maker has done his part properly, nearly as much depends upon the skill of the person who stocks or woods the implement; as the farmer too well knows by experience, who may have had the wood-work of a plow repaired or renewed, and afterwards found it another plow in operation, sometimes, it may be, for the better, and at others, perhaps, useless.

But supposing the patterns and the wood-work to have been made properly for a certain width and depth of furrow slice for two horses; the same plow, with a larger or less furrow slice, or perhaps with three horses, would become comparatively, if not entirely useless, without an adjustable clevis or fixture at the end of the beam.

The clevis in general use for a team of two horses or one yoke of oxen, is capable of being varied only to the extent of the size or square of the end of the beam, while for three horses abreast, or when it is desired to work the team on the solid ground, and not in the furrow, the Scotch clevis (so called) is in extensive use, and is one of the best modes of regulating the working of the plow. It is, however, an expensive part of the plow, if properly made, and is not unusually heavy and cumbrous, and the difference of its variaiton is too great for a perfect adjustment of the plow.

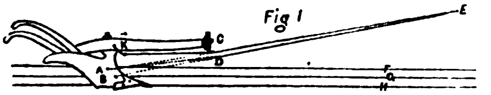
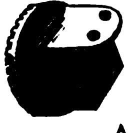


Fig 1

Fig 3.



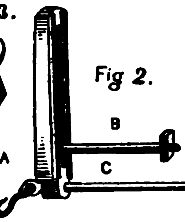
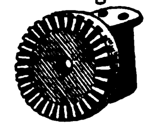


Fig 2.

Fig 4.



To more fully explain the engravings, I would first say, that all plows when in operation have a right line of draft, (often miss-called a "centre of draft,") and which may be described as follows. It is an imaginary line from the centre of resistance upon the mouldboard to the point of motive power, as the hames of the horses, staple-ring in the yoke, with oxen. This point upon the mould-board would be a little below the surface of the ground being plowed, and towards the forward part of the same, as for instance in fig. 1—let the line H. represent the bottom of the furrow, and the line F. the surface of the ground being plowed; then this centre of resistance would fall near the point on the mould-board, at A, and the point of motive power being at E., the line of draft would be from A. to E.; and in order to preserve the line of draft, the power should be applied to the plow as represented at C. But if the depth of furrow be changed, and the line H. remain the bottom of the furrow, and the line G. the surface of the ground, the centre of resistance would necessarily be lower in the mould-board, or as represented at B; the line of draft, consequently, would be changed and pass below the former point at C., so that it becomes necessary to change the clevis and attach the power at the point D, to insure the proper working of the plow. The above cut shows only the changes for regulating the depth, but the same rule holds true with regard to the width of furrow, or the position of the team, length of the traces or chain, &c., &c.

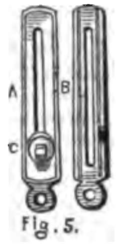


Fig. 5.

The improved and new clevis is shown in Fig. 1, attached to the plow, and is formed by a circular cast-iron face-plate, with a course of projections like small cogs near its circumference as shown in Fig. 4—and a bolt-hole through its centre, and the back so formed with flanges as to form a square box or cap just the size of the end of the plow-beam, as shown detached in Figs. 3 and 4. This "dial-cap" is confined on the end of the beam, across this, is confined a moveable iron plate or guide, 10 or 12 inches long, with a long slot or aperture through the middle, and an eye or hole through one end of it; and on one side it has two small ribs running its whole length, and which when placed against the dial plate, fit into the cogs of the dial. This plate or guide is shown at Fig. 5, A being the front, and B the back of it.

This plate is confined to the dial by means of a bolt passing through the slot and through the centre hole in the dial, and extending into the end of the beam several inches, and into an iron nut which is fitted in from the under side of the beam, the bolt and nut is shown at B, fig. 2. The head of this bolt is square, and is turned by a common wrench. It is shown at C, in fig. 5.

The plow is drawn by means of a rod which is attached by one end to the beam near the coulter, or at K in fig. 1. This rod extends along under, or by the side of the beam, and through the hole in one end of the iron guide at the fore end of the beam—this end or rod terminates in a hook or link, as at A, fig. 2.

Therefore, all that is necessary to change the clevis and to preserve the line of draft under different circumstances, is to loosen the bolt at the end of the beam, and move the guide in any direction, and any distance by means of the slot, and tighten the bolt again with the support of the cogs, which makes the whole firm. Its principal advantages are, the small expense of it—as it is put on any plow complete, in place of a common clevis, at fifty cents—its lightness and strength, being never broken by the hardest usage. By the use of the draft-rod, the beam is greatly relieved and is seldom broken, and the variations can be made to any degree of nicety.

This clevis was patented by J. M. C. Armsby, of Massachusetts, in December, 1845, since which time several thousands have been sold and used on plows, and with entire satisfaction. Several patent clevises have been offered about the country, and recommended very highly; but from my own observation and ten years' experience in manufacturing and selling plows, I have not seen one so simple, cheap and perfect as that above described. Horace L. Emery

Albany, July, 1848.

GUENON'S TREATISE ON MILCH COWS.

The subject of this work is noticed in the Report of the Commissioner of Patents. It is observed, (p. 206) that according to a recent report by M. Yvart, to the central convention of Agriculture in Paris, the following appears to be the present state of this alleged discovery:

"It is admitted that there is some general correspondence, as respects cows, but the signs are deficient as to the male animals. The classification which M. Guenon has proposed, is altogether too minute and extensive to be of practical value, as the pretended distinctions of the subdivisions are not verified on examination."

Since the publication of this work in this country, I have devoted some attention to the theory it embraces, and have come to the following conclusions, viz: 1. That a majority of cows have marks similar to what Guenon describes as "escutcheons," and that where these are found, there is a correspondence with his rules, so far as regards the leading qualities; that is, where the animals are kept under the same circumstances, those which have the marks of the first or highest class and order, gives the most milk, and those having the marks of the lowest, give the least. 2. That there are many cows that have none of Guenon's "escutcheons," and among them are frequently found those of the highest milking qualities; to such the rules can have no reference whatever. 3. That the theory claims *too much*, even in respect to those cows to which it is at all applicable; because it pretends to state the *precise* quantity of milk given by cows of each of the classes and orders, and the *exact* time they will continue in milk after having calved; whereas it is evident that the milking property depends in so great a degree on the quantity and quality of the food eaten by the animals, the care bestowed, and all the circumstances in which they are placed, that any external marks can be only indications of general qualities.

But there are other objections to the system of Guenon. It proposes to select and breed animals with exclusive regard to a single quality—that of giving a large quantity of milk—it notices only the points supposed to denote this, and overlooks others which are essential to constitute the most profitable animal, even for the dairy. A coarse, large-boned, weak-constitutioned cow, may, when full fed, without regard to expense, give a large quantity of milk; but this by no means proves that she is a good animal. Such cows are known to be enormous consumers, and to require extra attention in feeding and sheltering; and though they may, when supplied with good food to an unlimited degree, show the largest yield at the pail, yet when placed in a poor or rugged pasture, with ordinary exposure, a cow of proper proportions and muscular vigor, would yield a more valuable product. Besides, as *breeders*, animals of coarse bone and poor constitution are not to be encouraged—their tendency to various diseases, and general defects, is often manifested in an increased degree in their progeny, till the stock from their loose frames, unwieldy carcases and unhealthy habits, is rendered actually worthless.

The selection of sheep, for breeders, that possess the greatest possible fineness of wool, to the sacrifice of hardiness of constitution and other properties essential to *profit*, has been found injudicious; and so it will prove in selecting cows *solely* for the quantity of milk they may give. The properties of the dairy should certainly be secured, but the proper form and constitution should be added also.

Again, it is an error to suppose that the quantity of milk yielded by a cow is a criterion of her value for ordinary dairy purposes—it does not show what would be the amount or value of the butter or cheese she may yield; so that if Guenon's system were correct, the object sought for, (the most *valuable* cow,) could not be obtained, except in cases where the *quality* of milk was not regarded. It is admitted that in the preliminaries to his tables of "escutcheons," it is said that the quality of milk can be foretold, yet no signs are laid down for this purpose, and the tables and rules only refer to the quantity—to the number of "*litres*" of milk the cows of the different classes and orders will give.

It is a system, therefore, which at the best could only be adapted to those who *sell* milk with whom quantity is, of course, the only object.

A reference to those cows which have been the most remarkable for the production of butter, will support the remark that the quantity of milk is not a proper criterion of value in such cases.

The most extraordinary production of butter of which we have any account, is that by the "Cramp cow," so called, owned in Sussex, England. For five years this cow yielded an average of 545 pounds of butter per year, and in one year, (1807,) she produced 675 pounds. The greatest quantity of milk given by this cow in any one day, was twenty quarts, and the greatest quantity of butter produced in a week was eighteen pounds.

The celebrated "Oaks cow," which was owned in Massachusetts, yielded for three years an average of 394 pounds of butter per year, and in one year, (1816) she produced 484¼ pounds. The greatest quantity of milk given by her in one day, was eighteen quarts, (beer measure.) While this cow was owned by Hon. Mr. Quincy, he states that on several trials, five quarts of her milk afforded a pound of butter.

Now, cows are sometimes heard of which give from thirty to forty quarts of milk per day; but can any such product of butter as is above given, be shown from them? On the other hand, is it not a fact that the milk of such cows is generally deficient in the butyraceous quality, and that the butter it yields is often of loose consistence and inferior flavor? A Dairyman.

A Profitable Speech.—A correspondent of the *Farmer's Cabinet*, says that after hearing an excellent speech from Dr. Darlington, before the Philadelphia Agricultural Society, on the proper use and care of implements, he was induced to make such useful repairs, provide a tool-house, and keep his implements in so much better order than before, that "he calculates his savings in wear and tear of tools, since the delivery of that speech, has not been less than $50 per annum; while the time gained by having everything in its place, was worth as much more"—adding $100 a year to his income.

New use of India Rubber.—A stratum of India rubber placed under the rails of railroads, is found to prevent in a great measure, the jar experienced when passing in cars over ordinary railroads. Would not a layer of the rubber between the hoof and shoe of a horse, be useful in preventing concussions which so much injure the animal when driven on pavements or hard roads?

A DISCOURSE ON AGRICULTURE.

We are indebted to Dr. **Wm. Darlington**, for a copy of an address delivered by him at a meeting of the citizens of Oxford and vicinity, Chester county, Penn., assembled for the purpose of forming an agricultural society.

The principal objects of the speaker were to demonstrate the usefulness of *associated* labor and intelligence, and to show the necessity of a knowledge of the principles which are involved in the practice of agriculture. His observations on these points are given with much force, and we think the following extracts will be read with interest and advantage:

"Man, is by nature, a gregarious animal,—and evidently intended for the performance of mutual good offices. Even in his rudest condition, he soon learns the importance of co-operation with his fellows in producing desired results: and as he advances in civilization and refinement, he discovers that the benefits to be derived from combined skill and energy are in a direct ratio with his progress in improvement. The developments of Science not only excite a salutary emulation among individuals,—but they also show how much more may be accomplished by a concentration of effort—by a skillful union, and concert, of individual talent and energy. Hence the resort to *Societies*, for the promotion of desirable objects. By a judicious combination of their several means, and capacities, in the mode best suited to render them all available, men have accomplished purposes which, *individually*, they could never hope to perform.

"Associated efforts having been found thus valuable, in all great works of Art, requiring skill and force—and in the prosecution of researches after Scientific Truth,—the inquiry is naturally suggested, why the important business of *Agriculture* may not, also, be benefitted by a resort to similar expedients. Is there no sort of knowledge involved in successful Agriculture, which may be reciprocated, with good effect, among the members of a Society—or promoted by a generous co-operation? Is there no scientific or practical skill requisite, in the amelioration of soils—the culture of plants—or the management of stock—which may be advantageously imparted by the experienced, for the benefit of young beginners? If there are truths in Nature, which farmers are interested to know—or processes in Art, wherein dexterity and economy are desirable,—can any good reason be assigned why the cultivators of the soil should not associate, to secure to themselves those advantages? It may, perhaps, be alleged,—for the unreflecting do often make such random allegations,—that Agriculture is essentially a *practical* Profession; and therefore has little occasion for artistical skill, or scientific accomplishments. I am prepared to admit all that can be fairly urged in behalf of sound experience, and plain practical common sense—not only in Agriculture, but—in all human pursuits. I grant that the cultivation of the soil is eminently a matter-of-fact business. It is true, moreover, that the veriest clod-poll in the land may pursue the beaten track of his annual labors with tolerable success,—and may gather in his crops with little more knowledge, of the objects around him, than is possessed by the cattle he drives: But I can never believe that *true knowledge* is injurious to the operatives, or to the interests, of any profession, or business;—nor can I be persuaded that boorish ignorance is the proper condition and character of a thorough-bred Agriculturist. Most assuredly, it is not the appropriate character of an **American Farmer**. While I not only agree, but would insist, that a sound *practical* knowledge of their profession should be the primary object of the cultivators of the soil,—I must, at the same time, contend for the feasibility and necessity—in the existing state of society, and under Institutions like ours—of an adequate acquaintance with the laws of nature, and with the properties and true character of the objects immediately concerned in Agriculture. That acquaintance, of course, should be based on correct scientific principles,—so as to be always available when applied to the useful purposes of life. I hold it, indeed, to be essential to the safety and duration of this Republic, that our *Yeomanry* should keep pace with the march of general intelligence. As they value their just rights, and would cherish the attributes of Freemen, they must take care that their attainments never lag behind the age in which they live,—nor they, themselves, become unfit to mingle, and to struggle, with the master spirits who, for good or for evil, are ever seeking to direct the course and control the progress of communities.—*Agriculturists* being a majority of this nation, it is perfectly obvious that they must be either the intelligent regulators of its glorious career,—or the blind instruments of its destiny in the hands of artful Demagogues; and consequently they will be held responsible for the fate of the Republic, by their remotest posterity.—Ought they not, then, to employ every means, and exert every nerve, to qualify themselves for the high duties thus devolved upon them?

"There is nothing unreasonable, nor extraordinary, in the acquirements thus indicated as appropriate and indispensable to the *American Farmer*. In a nation fitted for Freedom—or which hopes to continue free—such attainments are enjoined upon all classes and descriptions of the People. Where men stand unfettered on the platform of equal rights, it is justly expected of every one, that he shall qualify himself to meet all the responsibilities belonging to his station in society: and this is eminently true of the particular business to which he is devoted. The remark is as correct as it is pointed and forcible, that "where knowledge is a duty, ignorance is a crime." No man should be held excusable for neglecting the opportunity to inform himself of that which it is his interest and his duty to know. *Professional men*, so termed, are bound to be familiar with the entire history, and with every department, of their several callings. The *Jurist* must make himself acquainted wiih the intellectual processes whence our present *rule of action* has been deduced,—in order that he may correctly apply that rule to all cases of difficulty between man and man. The *Physician* is required to know the structure of the human body, and to understand the laws of the animal economy,—so that he may avail himself of that knowledge, when called upon to relieve the various "ills that flesh is hair to:" And the *Divine*, also—whose sacred office it is to minister to our spiritual wants,—to expound the objects of our probationary existence here, and "vindicate the ways of God to man,"—even he is expected to furnish "a reason for the faith that is in him." *Artists* and operatives of every description, who would adorn their several pursuits, find it necessary to understand the *theory*, or principles, involved in their manipulations,—as well as to become expert in the practical details.—Such being the unquestionable fact, in reference to all other vocations,—it may well be demanded, why the business of *Agriculture*—*it*self a comprehensive system of Natural Science, involving more or less an acquaintance with all physical laws, and all terrestrial phenomena—and being moreover the great substratum and support of every other human pursuit,—*why should Agriculture, alone*, of all earthly employments, be regarded as calling for no scientific attainments—no intelligent observation of the varied natural objects, the interesting facts, and curious processes, around us: in other words—no rational exercise of the intellectual faculties with which a beneficent Creator has endowed us? It was, indeed, wisely provided, that an art to which the whole human family is indebted for sustenance, should be so simple in its essential features, that even stupidity can make a living, and mere muscular energy be profitably employed, in its prosecution: But, in the nature of things, it cannot be, that a business involving so much of Natural History—and controlled by so many of the laws indelibly impressed upon matter,—it can never be predicated of such a pursuit, that a knowledge of its true principles is superfluous—nor that its best interest may not be promoted by a cultivated intellect. I shall therefore assume, as an established position, that a knowledge of the Profession, *in all its relations*, is requisite to ensure the perfection of Agriculture, and to elevate it to its proper rank: and moreover, that in a country where Laws rule, and Yeomanry have a potential voice in their enactment, it is indispensable to the perpetuity of their Institutions, that an Agricultural people should be an educated and an intelligent people.

"I would, therefore, exhort our young Farmers to acquire so much Natural Science as will enable them certainly to know, and to discriminate between, the more important objects of their daily care and attention,—and by means which they may also treat of those objects intelligently, and correctly, in their intercourse with others. They should be so far acquainted with *Geology*, and *Minerals*—and understand so much of *Chemistry* and its laws—as to have a general idea of the structure and stratification of the Earth's crust, and a just conception of the reciprocal influences exerted by the constituent portions of the soil, and the atmosphere. This information may now be readily obtained, from elementary works within the reach of every one who has the taste or the inclination to possess it: But, that all might have a fair and equal opportunity to profit by such knowledge, according to their several capacities, it should be made an indispensable branch of the education of Youth, and faithfully imparted, by competent teachers, to every child in the Republic. Until such instruction shall be provided, it may be confidently maintained. that no better substitute can be devised, than is afforded by the intercourse of intelligent, public spirited men, in well-conducted *Associations*.

"Similar remarks may be applied to the expediency of a reasonable acquaintance with the *Vegetable*, and the *Animal* kingdoms. What sort of an Agriculturist is he—in this age. and country—who is so ignorant of the interesting *Plants*, on his own farm, as to be continually overlooking the most pernicious weeds, when they invade his premises—or mistaking, for them, those of a comparatively harmless character;—and who knows so little, even of those he annually cultivates, as to be unable to designate them by a name that is certainly comprehended, beyond the limits of his native parish? Is the young American Farmer, who can rest contented with such imperfect intelligence in his immediate Profession,—is *he* calculated—in this progressive era—to advance the interests, or maintain the appropriate rank, of that first, and noblest, and most indispensable of secular employments? Surely, it ought not to be thus with *Agriculture*—when all the kindred Sciences are going ahead with rail-road velocity. The several departments of knowledge are auxiliary to each other. They reciprocate lights, by which their obscurest truths are illustrated. They should, therefore, all proceed with equal step. It is not necessary—neither would it be expedient—for the practical Farmer to spend his time in studying the unimportant species of the vegetable creation,—nor in tracing the distinctive features of all the various tribes—"from the cedar tree that is in Lebanon, even unto the hyssop that springeth out of the wall": But, as his business is especially with the more interesting kinds—with the *culture of useful plants*, and the *extirpation of pernicious weeds*, I hold it to be his duty to acquire a knowledge of *these;* and such a knowledge, too, as shall be adequate, both to the proper management of them, and to the delineation, when called for, of their true botanical character. This would be a limited task, and an easy attainment,—quite within the reach of every ordinary capacity.—Some three or four hundred species, comprise all the more important plants usually observable on our farms—whether in the forest, the fields, or the kitchen-garden; and it must be an obtuse intellect, indeed, which cannot learn to know and distinguish that number of vegetable forms. The juvenile pupils of some of our Female Seminaries are, every year, demonstrating the facility with which the task may be performed.

"I shall not detain you with observations concerning the importance of *Zoological* information; for *that* is a kind of knowledge so intimately connected with our prosperity and comfort, that we cannot well avoid the acquisition of a reasonable share,—at least, with reference to the larger animals which are domesticated, or indispensable on the farm. Our daily habits and associations force the attainment on us all. The rudest bumpkin that ever trampled on flowers—or worked among weeds, without being able to distinguish one from another,—is nevertheless compelled to become acquainted, in some degree, with both the valuable and the mischievous animals,—fowls, as well as quadrupeds: indeed, it is wonderful to observe how well, and thoroughly, such untutored persons do often learn the distinguishing traits—the dispositions, and the characteristic peculiarities—of animated nature. Still, there is a *scientific aspect*, of which every department of Natural History is susceptible,—under which it assumes a methodical perspicuity—an illustrative arrangement—which is exceedingly gratifying, as well as instructive,—and merits the attention of all inquiring minds. There is, moreover, a *branch* of Zoology,—embracing myriads of tiny creatures—and many of them of the most destructive character to the hopes of the Farmer, which is yet imperfectly understood, and demands the closest scrutiny of every one concerned in the products of the vegetable kingdom. I refer, of course, to the multitudinous *Insect* tribes;—some of which are occasionally so injurious as to spread dismay throughout whole nations,—and, at the same time, of habits so obscure as to require the most patient observation, and the utmost sagacity, to ascertain their true history.—Even these minute researches—too generally neglected or despised—are demanded by the best interests of Agriculture;—and to be successful, they must be conducted on scientific principles. A little mental discipline, however—backed by perseverance—will soon enable the curious observer of Nature to make valuable contributions to the common stock of information. I would therefore have every *American Farmer*, who can appreciate the responsibilities of his position, to cultivate his intellect with the same care and assiduity that he does his acres. Let him habituate himself to note the facts—to observe the phenomena—and to investigate the theory of the processes—which are continually taking place around him: and let no one delude himself into the belief—nor seek to excuse his deficiencies by the stale and hackneyed plea—that he has not *time* for such pursuits. Why, those very pursuits are part and parcel—a very important part, too—of his own appropriate business. It is precisely for such business that his *time* is allotted to him. At this day, and in this land, it will not do, to urge the want, either of time or opportunity, for the due performance of our parts in life. Most people contrive to find time for what they really wish to do; and if driven to the necessity, are apt to *take* it, at any rate, for those pursuits which they are resolved upon. But the fact is, we all idle away, or waste in frivolous amusements, more time than would be requisite to fit us for the performance of our several duties. We are very prone to mistake the real nature of our *wants*. It is not so much to the *want of time*, as to the *want of inclination*, and of a proper sense of our responsibilities, that we should attribute our failure to possess the accomplishments which justly pertain to our Profession and station in society. It is *this want*—this neglect of the more elevated attainments, and this lack of a just perception of the beautiful—which has, hitherto, been most striking and conspicuous among the Agriculturists of our country. While our Farmers have generally attended—faithfully and successfully—to what is familiarly and truly denominated "the main chance,"—it must be confessed that too many among them have exhibited a lamentable want of tact and skill in planning and improving,—or in availing themselves of natural advantages, in the arrangement of their rural establishments.

"Next in importance to successful culture, and a correct knowledge of the objects and principles involved in the process, is the attainment known as good *Taste*,—or that refined sense of the beauties of Nature, which knows how to appropriate her charms, in the embellishment of farm-houses, or cottages—and to invest them with that witchery and grace which should ever be associated with a country residence. No person, who has enjoyed the delights of a tasteful rustic dwelling—embosomed among venerable trees, and reposing amid the verdure of flower-spangled lawns,—can fail to be shocked at the contrast of a rude vulgar-looking tenement, awkwardly stuck in some open weed-grown space, without a shade tree, or an enclosure, to protect it from the rays of a burning sun, or the annoying approaches of the trampling cattle: and yet the difference may be entirely owing to the exercise of a cultivated taste in the one case, and a total destitution of it in the other. *Fruit trees*, and *Shade trees*, should be regarded as indispensable appendages of every human residence. If duly attended to, the former will amply gratify the palate,—while the latter will also minister to our enjoyment—directly, by the refreshing shelter afforded to ourselves—and indirectly, by attracting to their branches the lovely Serenaders of the feathered race. How delightful, in a tree-embowered cottage, to be roused from our slumbers by the gushing melodies, which, in such abodes, ever greet the dawn of a summer morning! By providing a shady retreat for the little warblers—and protecting them from the weapons of reckless sportsmen—we not only secure their punctual attendance, with the grateful tribute of their vocal strains on each returning Spring,—but we are rewarded, tenfold, for all such benevolent offices, by the industry with which the welcome visitors labor to rid us of annoying and destructive Insects. It should, therefore, be the business and the pleasure of the intelligent Farmer—wherever located—thus to improve and adorn his premises."

DOVE-COTE AND RABBITRY.

In reference to the request of a Mississippi correspondent, to furnish a plan of a pigeon-house, we give the engraving on the next page, which is designed for both pigeons and rabbits.*

Pigeons are not at all particular in regard to their shelter or breeding-places. Any box, nailed against the wall of a barn or other building, with holes for ingress and egress, will satisfy them. Even shelves, placed around the inside of some out-house, will answer every necessary purpose. But when it is designed to render these birds as much as possible an ornament to the homestead, more sightly and tasteful habitations are provided.

If several varieties of poultry are to be kept, a separate house will be found most suitable; it should, of course, be divided into the requisite apartments for the accommodation of the different kinds, and the dove-cote may be placed on the top—surmounting the roof in the form of a cupola. This plan, if perfectly carried out, makes a complete *aviary*, which, if properly situated, adds greatly to the beauty of a country residence. There are, however, comparatively few people who live in the country, and may wish to keep pigeons, who can afford the expense of so costly an establishment.

A cheap and rather ornamental dove-cote, may be made of an empty cask raised on a pole. It may be a barrel or a hogshead, according to the number of birds to be accommodated. If a hogshead, it may be divided into three stories and partitioned off for separate nests. This makes a pretty and convenient house for a small number of pigeons. The chief objection to it is, it is difficult to clean. In this respect the following plan, which we have seen adopted, is preferable:

A small square house is erected on four poles. Rows or tiers of boxes for nests, are arranged on three sides of the house. A space is left in the centre, large enough for a person to enter and clean the boxes, which should be accessible for this purpose. The space should be closed by a door; the building to be reached by a ladder.

Boxes for nests should be about eighteen inches square on the bottom, and about a foot in height. For holding the nests, cheap wicker baskets, or small earthen pans may be used. The pans may be three inches deep, eight inches over at the top, sloping to the bottom. Some fine soft hay, put in the baskets or pans, will save the pigeons the trouble of carrying in the materials for nests. The boxes should be frequently cleaned, as the accumulation of filth is unfavorable to the health of the birds.

In the plan illustrated by our cut, the pigeon-house is, as before observed, placed over a rabbit-warren,—the combination forming an ornamental structure,—which, if placed on an island, handsomely planted with trees, in the centre of a sheet of water, adds a highly picturesque feature to the scenery.

The area, surrounded by palings, is about twelve feet in diameter. The inside is excavated to the depth of two or three feet, forming a pit in which the rabbits are kept. The top is thatched, as giving a more rustic air than any other kind of roof. The posts and chain are designed as a protection of the enclosure

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*The cut is taken from an English work, entitled "Farming for Ladies."

Dove-Cote and Rabbitry.

against cattle and horses. It does not appear, however, that any excavation is necessary—the rabbits will probably do quite as well if kept on the surface.

But rabbits are more commonly kept in huts or "hutches." In regard to the mode of making these, and the general management of the animals, we copy the following from the "Farming for Ladies:"

"The breeding hutch, as being the habitation of the doe, is always the larger and contains a double apartment—one for the nest, and the other for the feeding room of the young, when old enough to come into it. The best size is about four feet long by two and a-half feet wide, and eighteen inches to two feet high; but they are often made smaller, and those not meant for breeding, are seldom more than two-thirds that size. They are latticed with wire in the front of each, as, if made of laths, the rabbits would gnaw them; but the division parted off for the reception of the breeding nest, is closed both at the front and sides, leaving only a small door in the interior for the entrance of the doe: indeed an inner division with a sliding door is used for confining the rabbits while the outer part is cleaned. There should also be a moveable feeding trough, which should be regularly taken away after every meal; for rabbits, like horses, if allowed to blow upon their food will not afterwards eat it, unless pressed by serious hunger. The troughs should be made of tin or iron, to allow of their being easily cleaned; and should have separate compartments, of not more than four inches long, both for different sorts of food, as well as to prevent the rabbits from getting their feet into the trough and throwing out their corn. Some persons even add a small rack at one end of the hutch, for the purpose of containing the hay on which they feed; but the small quantity usually given, is more commonly left on the floor. The trough should be either inserted as a drawer, or if placed outside, the hutch should be covered by a hinged flap to shut and open, in either the front or one end. The floor is commonly pierced with holes to allow the escape of the urine; but, as the greatest attention is necessary to be observed in the cleansing, it is a good plan to have a false bottom, which may be drawn out like that of a bird cage, for the removal of the excrement, and ought to be every morning scraped and strewed with a little sand, or, in cold weather, covered slightly with refuse hay; for rabbits will never thrive unless kept dry and clean."

"Hutches of this description, well made and of good material, will not cost more than from eight to ten or twelve shillings, [two to three dollars,] according to their size. Any carpenter or joiner can make them with these directions, and we have lately seen one of the largest size, in every respect well fitted for breeding, the price of which was half a guinea—[about $2.50.]

"The hutches if numerous, may be placed over each other, and are sometimes ranged round an outhouse kept for that purpose; but is seldom necessary for small families, and the better way is to put them upon a stand in the open air against some sheltered wall, for a too confined atmosphere is not natural to them, and if kept in a close room they emit a faint and unpleasant odor. The hutch should, however, be covered at night, as cold will prevent them from breeding in the depth of winter."

In this country, rabbits are chiefly kept as objects of amusement, but in England they are reared for their flesh, and large numbers of them are sold in the markets. Their flesh, especially when young, is well tasted and wholesome; for invalids it is considered equally as proper as that of fowls. They are generally killed "from the teat," while they are from four to six weeks old. They weigh at that age, if well fed, from two to three pounds, "trussed for the table."

There are several varieties, some of which are highly prized by fanciers. Some are very large, reaching the weight of ten to twelve pounds, or more, dressed; and when castrated and well fed have been known to weigh fifteen pounds each. Mowbray speaks of "a very large variety, of the hare color, having much bone, length and depth of carcass, large and long ears, with large eyes, resembling those of the hare. They might" (he says,) "well be taken for hybrids or mules, but for the objection of their breeding. Their flesh is high colored, substantial, and more savory than that of the common rabbit; and they make a good dish cooked like the hare, which, at six or eight months old they nearly equal in size." We have seen a few of this variety—they are fine-looking animals. There is another very large variety, chiefly of a yellowish brown color, with lop ears of enormous length. It is said that the ears of one of this variety, which gained a prize from a fancy "Rabbit Club" in London, measured across the head, from the tip of one ear to the outer edge of the other 20¼ inches. These are sometimes called Spanish rabbits.

But a writer who appears to understand the subject, observes—"For common use we believe the large grey rabbit to be the best, though the black and white seem to be the favorites among amateur breeders; but any sort will do for the hutches, provided they be healthy, of good size, short-legged, and broad in the loin."

The proper food for rabbits is oats, peas, wheat, buck-wheat, Indian corn, with potatoes, turneps, and clover or lucerne, in summer, and nice, well-cured clover hay in winter. They are similar in constitution and habits of feeding to sheep, and like them are liable to injury, such as diseases of the liver from eating largely of succulent food. Mowbray directs that they be fed regularly three times a day, with such quantity as they will eat up clean.

Wire Worm.—C. W. Johnson details an experiment, where, on a 50 acre field sown with wheat, half an acre was preceded by a crop of white mustard. This half acre was wholly exempt from the wire worm—the rest of the field was much injured. Another field of 42 acres, so much infested with the wire worm, that nearly every crop for nineteen years was largely destroyed by this insect, was then wholly sown with white mustard. The following year not a wire worm could be found. He therefore concludes, that by destroying all weeds and roots, and by a careful and clean drill culture of the white mustard, the wire worm may be expelled.

The Steam Engine.—It is estimated that steam power effects in England a saving of as much labor as could be done by three hundred millions of men.

IMPROVEMENT OF SANDY AND GRAVELLY SOILS.

Mr. Adam Anthony, of North Providence, furnishes the officers of the Rhode-Island Society for the Encouragement of Domestic Industry, an account of the mode in which he has very successfully improved his farm. The farm consists of 150 acres, but deducting 50 acres of wood, 18 in a "natural pasture," and 10 in wet meadow, there is but 72 acres suitable for tillage or hoed crops. The principal portion of these 72 acres, is "very sandy, with a subsoil of sand and gravel," and was originally very poor. Mr. A. took possession of the farm in 1826. "The crops of that year, were 5 tons of English hay, 3 of bog hay, 2 of oats, 200 bushels potatoes, 200 of turneps, some fruit and a supply of garden vegetables for home consumption—worth, including pasture feed $385. The produce of the farm last year, (1847,) was by estimation, 200 tons of green fodder for soiling, 100 of hay, 25 of millet, 17 of dry corn fodder, 640 bushels of potatoes, 750 bushels Indian corn, 50 bushels apples, with other fruit and garden vegetables—the value of which, inclusive of pasture feed, is $3.575. Nearly tenfold increase in the products of the farm."

Previous to 1826, the sandy portion of the farm had been put to Indian corn and rye, at intervals of about six years, and had yielded about eight bushels of corn, and about five bushels of rye per acre. The rye was sown on the corn-hills—no grass seed being ever sown. It was of so little value for grazing, that 75 acres, half in wood and half in pasture, rented in 1826 for $15. This same pasture produced last year, more than half the crops above named.

The basis of Mr. Anthony's improvement, has been the application of *leached ashes*. The products obtained by the use of ashes, afforded the means of keeping a larger stock and increasing the quantity of manure; the manure permitted the introduction of other crops, which being consumed on the farm, laid the foundation for larger yields and more extended cultivation. His first crops were clover and millet, and his mode of preparing the land was to plow "at first from four to six inches deep, turning the furrow flat when there has been tenacity enough for the purpose, followed by the roller, and if the field did not then present a surface sufficiently smooth for the reception of ashes and seed, the harrow, or bush, or both, as circumstances required, were applied. The ashes placed upon the field, in rows six paces apart—the heaps of uniform size, distance six paces in the row, and in the aggregate containing 200 bushels the acre, (the usual quantity first used on these poor soils) have then been evenly spread, and the field marked by drawing a chain into lands five paces wide in two directions, the last at right angles with the first. This done, the millet and clover seeds, previously mixed together and divided into two equal parts, were sown; one half in one direction of the field, and the remainder crosswise, or in the other. Two harrowings, the last across the first, succeeded by the roller, usually completing the operation."

The millet and the clover are both cut for hay; the first crops being about a ton and a half of hay, each, per acre. The third year after being sown, the land is again turned over, the plow running rather deeper than before, and the former course is repeated, with a somewhat less quantity of ashes than before. After a third repetition of this process, Indian corn and potatoes are brought in; these crops always receiving a dressing of manure—from six to nine cords per acre. For Indian corn, the stable or yard manure is always plowed in, the plow running from six to seven inches deep, followed by a roller, to prevent the disturbance of the sod in the after culture. [It should be remembered that this is a very loose soil, and needs compression.]

Mr. A. prefers sowing millet early in June, but the time may vary according to circumstances, from the twentieth of May to the tenth of July. If sown earlier, the weeds obtain the ascendancy; if later, the crop is liable to injury by frost. The quantity of seed is about forty quarts per acre. When grown of suitable fineness and well cured, Mr. A. considers it excellent fodder—better for soiling than most grasses, but inferior for this purpose to rye. Sandy soils produce it in greater perfection than any others; on heavy loams it is apt to rust. Mr. A. remarks that when clover seed is sown with millet, many of the young clover plants perish, and he recommends an extra quantity of seed on this account. He advises to omit sowing the grass seed till after the crop, whether of millet or any other kind of grain, is off; and he prefers stocking down in the last of August or beginning of September, to any other time. We will add, that we should prefer sowing clover at this time, to sowing it with millet or any spring crop, on such a soil as is here described.

Indian corn and rye are used for soiling. The corn "is drilled in rows 2½ feet apart, at different periods, for this purpose, and thus affording a successive supply. The seed used, from 2 to 2½ bushels the acre, covered with the hoe and dressed with the cultivator. The large sweet variety is esteemed the best on account of its superior richness, and the avidity with which it is eaten. It is, however, less productive than the flat or southern."

When rye is sown, "the land is stocked at the same time with clover for soiling, about the commencement of autumn, either on sward, clover lay or old ground, dressed with stable manure or ashes. The rye is commenced upon early in May, and the clover succeeds that of other fields when their produce has become too old to be relished. This is followed by millet. Next comes corn, the earliest drilled for the purpose. Afterwards suckers, and then again corn. This is all fed at the barn."

Management of Stock on the Soiling system.—Mr. Anthony gives his mode of managing stock as follows:

"The stock, averaging about 40 head, stand upon a platform, raised six inches above a tight floor which projects beyond the sill a few inches over the side of a planked trench outside of the barn. Here the cows (usually 36 in number) are fed three times a day. They go also to the pasture for a slight picking, for water and exercise, morning and evening. But they are always stabled at night, and a sufficient supply of peat or swamp mud, is placed just below the platform for the reception of the urine and manure. After lying 24 hours, the whole mass is hauled over and shoved through an aperture between the floor and the boarding of the barn into the trench referred to. In this way, 300 cords of excellent manure are annually made by the stock. In the planting season it is carried to the field and plowed in, undergoing little or no fermentation until it is turned under or incorporated with the soil. At other times it is placed in large heaps, when it is to be used the ensuing season.

"For seven months in the year, the cows go out only once in the day, having an hour or more in fine weather for air, exercise and water. All of these purposes being regarded as very essential to their health and comfort. They are furnished with some slop in summer, but are much more liberally supplied at other seasons of the year, especially in winter. Shorts, meal of Indian corn, and oil meal constitute the slop referred to. The quantity fed to each cow is various, and when a large quantity of milk is desirable and practicable, the feed should be such as to neither increase nor diminish the flesh of the animal.

"Formerly it was my practice to change nearly all my stock annually. More recently about one half, (quite as large a proportion of the whole raised as is worth keeping) are allowed to bring calves. The remainder are milked until they are fit for the shambles, when they are sold and their places supplied by others.

"Ordinary keeping is not calculated, in my opinion, to develope the milking properties of the best cows. Those that I have purchased, have rarely given more than two-thirds the quantity of milk the first, as in subsequent seasons, the feed in both cases being the same. They should be in good condition at the time of calving, or generally with liberal feeding afterwards, their tendency will be to flesh rather than to milk."

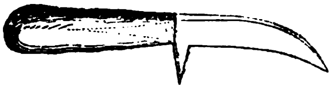
HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Experiments in Grafting.

CONTACT OF BARK NOT ESSENTIAL.—It is well, but not absolutely necessary that the *bark* of the graft and stock should touch to insure success. A shoot that has been cut in season, will, if kept moist, throw out a woody substance at its lower end—this will fill the space between the graft and the stock. I have made the wedge of the graft so thin on the outside, that when placed in the stock, the bark of each did not approach nearer than the twelfth of an inch in any place—they were waxed and all grew, and were only a few days later in starting.

Grafting Wax.—The following proportions suit me best:—3 lbs. rosin, 1 lb. beeswax, 10 ozs. tallow,—melted together and well stirred while cooling; particularly the latter part—on this depends the light color which is essential to prevent heating by the sun's rays. When used, it may be softened in warm water, if otherwise too cold, the hands to be rubbed with lard to prevent sticking. In this way, it may be applied in the best manner and with great facility.



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Grafting Knife.—The tool figured in the Feb. No. will not be likely to be used by such as set 4 or 500 in a day. If it answers as well (which I doubt) there is much picking up and laying down in using it. The knife here used (Fig. 6,) is merely a crooked one with a wedge for opening the stocks, made as part of the blade at right angles near the handle. A blow with a small mallet will split the stock, another under the point will withdraw it, the wedge is then driven to open the cleft, the graft put in and no time lost in changing tools.

In grafting apples and pears, the best success has attended those put in when the trees are in full bloom—of one lot of over 250 set at that period last spring, not one failed to grow. M. QUINBY, *Coxsackie, March,* 1848.

Remarks.—One who has never used the tool described in the second number of the Cultivator, cannot conceive of the ease and perfection of its work. Such is the facility with which it is used, that a hundred stocks may be headed down for grafting in the most perfect manner, in as many seconds; a perfectly smooth slit for the graft is made with equal facility, by a single motion of the hand; an iron wedge opens this slit; using the head of the tool as a small mallet; all with no more picking up and laying down, than the knife and mallet described by our correspondent, while the work is both more radid and more perfect. These remarks are founded on the experience of years, in the insertion of many thousands of grafts with this implement.

NEW MODE OF GRAFTING.—In some of the high winds, early in June last, I had some pear grafts broken off, which had been inserted a year before, and were of strong growth. Wishing to preserve the kind, it occurred to me that it was possible to do so by cutting off the short branches from the main branch, and using them as scions. These scions were from an inch to three inches in length, and were cut out of the main branch in the same way as in budding, and were grafted the same as in T budding; being carefully tied with matting. The stocks in which they were engrafted, were cut off a little above the place of insertion.

The result of this experiment has been highly satisfactory, for not one of the scions failed; but all commenced growing in ten or twelve days, and grew from two to three feet in the course of the season.

I have tried various other methods of grafting and budding, but never with as good success as in the manner here described. P. D. S. *Hartford, Ct., February,* 1846.

Destruction of fruit buds by Frost.

M. QUINBY of Coxsackie informs us, "For the last ten years, whenever the mercury has fallen more than eight degrees below zero during the winter, the fruit buds of our peaches have been invariably frozen to death; when it remained above that point we have always had fruit. Two years during that time, the coldest weather was exactly eight below zero; one year it killed all the fruit the other about half. Consequently that is about the last degree of cold the peach can endure. The fact can be ascertained that the fruit buds are killed any time in the winter after weather warm enough to take the frost out; the centre then turns black. On the 11th *January* the mercury was 21 deg. below zero. I expected to find peaches killed, but not cherries and plums, which appear to have shared the same fate. It has been suggested that cherries and plums would not have suffered, had it not been for the warm weather the first part of winter, starting the buds. How is it? Did the buds start, and were they killed by the subsequent cold; or is there a limit to their endurance of cold, as well as the peach?"

Our correspondent is referred to the remarks on p. 181 of the present volume of the Cultivator, showing that it is not low temperature alone which destroys fruit buds. Indeed the fact that the point at which they are killed is placed quite differently by different cultivators, proves this to be the case. When peach buds have been much swollen by warm weather in winter, we have known many of them destroyed at a temperature of only five degrees below zero, leaving however enough for a good crop. On the other hand, we are assured on good authority, that at Montreal crops of peaches have been obtained, after the thermometer had sunk as low as twenty-eight degrees below zero—not the slightest swelling of the buds having previously taken place, and the trees being merely protected from *sudden changes* by a thin mat.

Under *ordinary circumstances* however, in the peach districts of New-York and New England, it rarely happens that the crop escapes a frost of 12° or 15° below zero.

There is no doubt that the cherry and plum, like the peach, is rendered more liable to destruction by the previous swelling of the buds—we have known the entire cherry crop destroyed by cold only 12° below zero, when the previous winter weather had been quite warm

Vines on Forest Trees.

In travelling through the states of Massachusetts and Connecticut a few years since, I was drawn to observe the quantities of grapes growing wild on vines that were climbing over the tops of the forest trees;—most of those which I tasted were of good quality, and they grew in abundance without any care whatever.—I have often heard people from the above mentioned states, speak of the excellent grapes that they used to gather from vines on the forest trees. A few years since, a friend of mine took the trouble to collect a quantity of cuttings of the best varieties, which he planted in his garden. The vines when they grew were managed with much care, after the manner that Isabella and Catawba vines are, on open trellises.—The consequence was, very little fruit was produced, and that of a very poor quality; and as he thought he had done his best, he at leath came to the conclusion that it was the change of location that had made such a wonderful change in the fruit. It happened that a few tendrils from one of the vines came in contact with the projecting limb of a plumb tree, and in a short time the shoots reached the top of the tree, and the next year the owner was gratified to see good fruit, and of as good flavor as any that he had ever tasted of the kind in their native place. In several instances I have known Isabella vines to run rampant over the tops of large trees, and they have never failed to produce large crops of grapes every year, of better quality than any that I have ever eaten grown on trellised vines, and without any labor being expended. There is one vine now growing in this town, that produces more grapes than any other six that are managed in the ordinary way; and what I wish to suggest is this: why cannot Isabella and Catawba grapes be raised to any extent throughout our whole country, on the tops of the scattering trees in the fields, and along the borders of wood-lands,and woody ravines, without any labor being expended or required, except in planting the vines, and training them up a permanent post set for that purpose? There should be three shoots fastened to the sides of the post, with loops of leather, until the beginning of March in the second year,at which time the number should be reduced to one, which is to make the trunk of the vine. It should be protected while it is small with stakes, to prevent injury by cattle or other animals. The vine needs the support of the post until the tendrils obtain permanent hold of the limbs of the tree, and the body attains sufficient size to withstand anything that may come against it. The vines should not be set near the body of the tree, because the ground is already occupied by the roots of the tree—but directly under the extremities of the branches on the south side, where the vine will receive the warmth of the sun. If the soil is not first rate, it should be taken away and replaced with at least one cart load of rich sods from the roadside, which is much better than any highly manured soil for the vine or any fruit tree. Much has been written on the management of vines, with many precise rules for pruining, training, manuring, &c., which all amounts to nothing with farmers generally, who have no time to devote to such work. All that our native vines want is plenty of space to extend over, and plenty of air and sun, all of which they receive perfectly if they are allowed to run over the tops of the trees. Another advantage in planting vines in the situations that I have described, is that they are rendered more lasting, and will produce fruit for several generations, judging from specimens that I have seen growing in different parts of our country. Writers compute the age of the vine at two hundred years, and they have been known to reach a much greater age; hence in planting a vine we are doing work that need not be repeated soon in the same place if properly done. I. HILDRETH. *Seneca, April* 7, 1848.

Destruction of the Rose-Bug.

In the November number of the Cultivator for 1847, W. L. Eaton, asks how he shall most effectually destroy the rose-bug, one of the greatest pests that we have at present among us. In answering this question it may be well to glance at the description, and habits, of this insect, as described by Dr. Harris, in his "Report on the Insects of Massachusetts."

The natural history of the rose-chafer, was for a long time involved in mystery, but is at last fully cleared up. The unexpected arrival of these insects in swarms, at their first coming, and their sudden disappearance, at the close of their career, are remarkable facts in their history. They come forth from the ground during the second week in June, and remain from 30 to 40 days. At the end of that period, the males become exhausted, fall to the ground, and perish; while the females enter the earth, deposit their eggs, return to the surface, and after lingering a few days, die also. The eggs laid by each female are about thirty in number, and are deposited from one to four inches beneath the surface of the soil; they are nearly globular, whitish, and about one-thirteith of an inch in diameter, and are hatched 20 days after they are laid. The grubs attain their full size in the autumn, being then nearly three-fourths of an inch long, and about one-eighth of an inch in diameter. They are of a yellowish-white color, with a tinge of blue toward the hinder extremity, which is thick and obtuse or rounded; a few short hairs are scattered on the surface of the body; there are six short legs, or a *pair* to each of the first three rings behind the head; the latter is covered with a horny shell of a pale rust color. In October they descend below the reach of frost, and pass the winter in a torpid state.—In spring they approach toward the surface, and each one forms for itself a little cell of an oval shape, by turning round a great many times, so as to compress the earth and make the inside of the cavity hard and smooth. Within this cell the grub is transformed to a pupa, during the month of May, by casting off its skin, which is pushed downwards in folds from the head to the tail. The pupa has somewhat the form of the perfected beetle; but it is of a yellowish white color, and its short stump-like wings, its antennæ, and its legs are folded upon the breast, and its whole body is enclosed in a thin film that maps each part seperately. During the month of June this filmy skin is rent, the enclosed beetle withdraws from its body and its limbs, bursts open its earthen cell, and digs its way to the surface of the ground. Such being the metamorphose and habits of these insects, it is evident that we cannot attack them in the *egg*, the *grub*, or the *pupa* state. The enemy, in these stages, is beyond our reach, but they must be either *crushed*, *scalded*, or *burned*, to deprive them of life, for they are not affected by any of the applications usually found destructive to other insects.—They should be collected *daily* during the period of their visitation, and should be committed to the flames or killed by scalding water.

It is not expected that we shall go into our *orchard* to collect these animals, but surely it is worth the trouble, to collect them in the garden, on the peach, the cherry, and the grape. The best instrument of destruction is an old warming-pan; fill it half full of live coals, and with a wing or your hand, brush or jar them into your pan: (this should be done in the cool of the morning.) In this way, with *patience* and *perseverance*, you will at least very much reduce the number; for every female you kill, you decrease the future number thirty fold. Hampden. *Hampden Co., Mass.*

Management of Fruit Trees.

Almost any kind of upland may be prepared for an orchard. For the apple, the most natural soil is that which is well adapted to corn, and requires but little extra preparation.

The poorest upland soil for an orchard is perhaps moist heavy clay. This must be prepared by draining off all the superabundant surface water, which may be done by open ditches or under draining. Set the trees on the top of the ground without any excavation; but if suitable holes are dug, fill up with rich loam, and if convenient add a mixture of slate and small stones.—Haul on earth of a loose rich mixture, and bury the roots rather deeper than when set in the usual way.—The failure of nearly all kinds of trees set in a stiff clay may be attributed in part to planting them too deep.—The holes prepared for the trees, form basins to receive the surplus water, which literally drowns them out.

In transplanting any kind of trees, keep the roots as moist as possible while out of the ground. In setting, the earth should compactly fill all the space around and under the roots, allowing each root and fibre to be buried in its natural position.

I would recommend high, rolling land, for an orchard on that part of the farm least wanted for tillage.* If the place selected be rocky, or the soil poor, it will require more labor, but two hands will soon cart on soil of the right quality enough to cover fifty trees. In common porous soil, let the trees be set with the upper roots about level with the common surface, add rich soil with stones to round up six or eight inches near the body. This will also aid, in some measure, to ward off the mice.

Arrange the trees so far apart that when full grown the top of one will not touch the others. At this distance, they grow faster, receiving more nutriment both from the earth and atmosphere. The fruit plucked from that tree which is supported by a full share of light and heat, will yield more of an improved flavor and color.

I have been made acquainted with but two extensive nurseries in the state of Vermont; these each contain over forty thousand trees. One of them is in Weathersfield, on Connecticut river; the other is in a lake town, conducted by Seneca Hazzard, of North Ferrisburgh. The latter is in a very promising condition, containing most of the valuable and popular varieties of apples, pears, plumbs, cherries, peaches, &c. S. W. Jewett.

Bleeding of the Vine.—Dr. Underhill stated before the New-York Farmer's Club, that the bleeding of the vine, so far from being injurious, seems to insure a good crop of grapes.

New and newly introduced Apples.

AUTUMN APPLES.

Autumn Strawberry, or *Late Strawberry.*—This variety, which originated in Western New-York, is one of the finest of all table apples. It is medium in size; roundish, slightly oblong-conical, obscurely ribbed; whole surface dotted and streaked with deep red; stem quite slender; calyx in a distinctly ribbed basin; flesh yellowish white, sub-acid, remarkably tender and very juicy, and of an exceedingly agreeable flavor. It ripens about six weeks later than the early strawberry, and is greatly its superior in excellence. The young trees grow more freely than any other known variety. A good bearer.

Gate, *Belmont or Waxen.*—This excellent apple has been known for many years in Ohio, and has borne several times in Western New-York. Its merits entitle it to the highest rank. It is rather large; varying in form, but usually ovate-conical, often roundish-conical or oblong-ovate, sometimes with a narrow or pointed apex, and at others quite blunt or rounded; a clear pale yellow, of a waxy smoothness, often with a rich, brownish cheek; stem varying in length and thickness, from scarcely two-thirds of an inch long and stout, to an inch and a-half long and slender; flesh yellowish, of fine texture, tender when ripe, somewhat compact, with a fine rich sub-acid flavor, somewhat resembling that of the Fall Pippin. Tree a free grower, and abundant bearer. Ripens late in autumn. The identity of this variety with the *Waxen* of Coxe, which is described as a "flat" apple, appears not to have been fully established.

Fall Orange.—Its origin is unknown. When well ripened *on the tree*, it is nearly or quite first rate in quality, and is valuable for its fair appearance, and the free growth and early and uniform productiveness of the tree. It is perfectly distinct from the Tallow apple, Orange or Lowell, of Onondaga and Oswego counties, N. Y. It is large, round-ovate, regular; light greenish yellow, becoming a light yellow, dotted with grey, and sometimes with a slight brown cheek; stem half an inch long; calyx in a basin with a smooth rim, and slightly plaited within; flesh, sub-acid and tender. In character it resembles the Cumberland Spice and the White Bellflower of the west, but is believed to be superior to either. Ripens during the last half of autumn.

Tallow Apple, *Orange or Lowell.*—Quite large, roundish oblong, approaching obtuse-conical, very slightly ribbed; green, becoming bright yellow; stem an inch long; calyx in an even rather deep basin, which is distinctly plaited within, while the rim is remarkably smooth and broadly rounded; flesh rather coarse, with a rich rather acid flavor—hardly first rate, but valuable from its free growth, productiveness, large size, and fine appearance. Ripens early in autumn, and may be kept a month or two. This variety has been cultivated at Cleveland, Ohio, under the name of Queen Anne.

Hawley *or Dowse.*—This fruit was first described and figured in the Cultivator, on p. 114, of volume IV. It was afterwards described in the Horticulturist a year ago. It is one of the very few apples of the largest size which prove to be of excellent quality. It ripens about mid-autumn, or a month earlier than the Fall Pippin, which it in some degree resembles; it is more tender in texture than the Fall Pippin, and consequently not so well suited to distant markets. It is a good bearer, and the fruit always fair. Being of a mild flavor, it is apt to be underrated when sent a distance. It originated in Columbia county, and has been considerably disseminated in Onondaga, Cayuga and Tompkins counties, N. Y. Considering all its qualities, it will rank fully equal to the Gravenstein and Fall Pippin.

St. Lawrence.—A large, handsome, and fair au-

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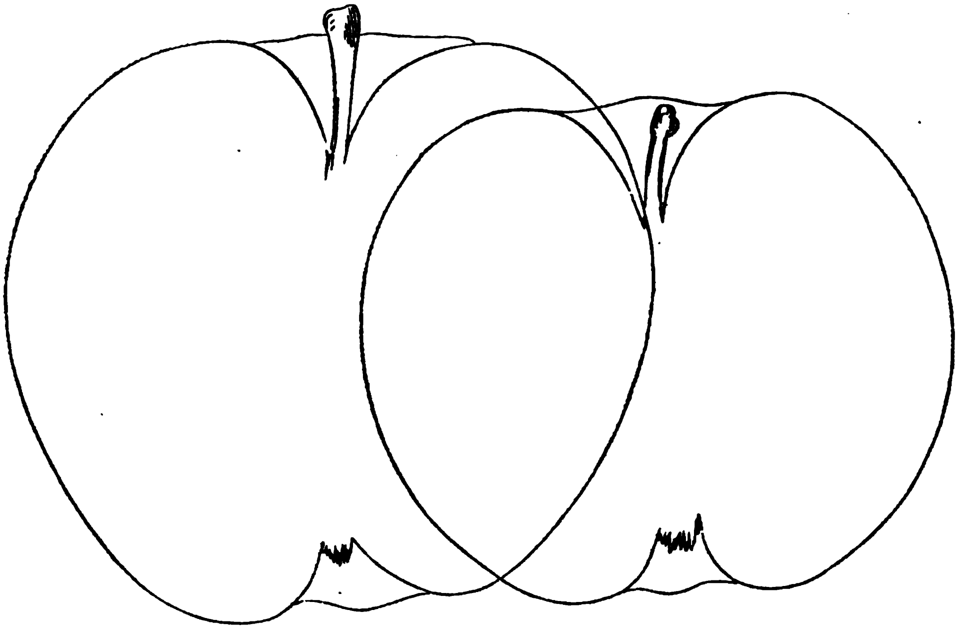
*This should be regarded as a matter of necessity, rather than of choice; as the best soil, kept in good tillage, will yield fruit in much greater abundance, and of much better quality, than a poor and neglected soil.—*Ed.*



Gate, or Belmont.

Leland's Spice.

tumn variety, much cultivated in the vicinity of Rochester, and originally from Lower Canada. It is hardy, productive and of free growth, and though usually very highly commended, we have never been able to place it above second rate. It is nearly round, approaching flattish-conical, covered all over with dark or blackish red broken stripes, which are remarkably distinct, and become very short and narrow as they approach the calyx; stem half an inch long; calyx in a rather deep, even basin; flesh very white, often with minute red streaks, tender, rather spongy, acid. Fine for market. Ripens mid-autumn.

Autumnal Swaar.—One of the finest *sweet* apples of autumn. Origin unknown. Large, flattish, rich yellow, usually a reddish brown cheek; stem often long and slender, sometimes short and rather thick; set in a wide, slightly uneven cavity; calyx in a wide, slightly ribbed basin; flesh very tender, yellowish, not juicy, with a very sweet, and agreeably spicy flavor. Mid-autumn.

Melon, *or Norton's Melon.*—Originated in East Bloomfield, Ontario county, N. Y. It was first described in the Cultivator of 1845, p, 56, by Ellwanger & Barry, under the name of Norton's melon; but as it originated in the Chapin and not in the Norton orchard, the first part of the name, which the rule of priority would otherwise compel us to retain, has been dropped. It has since been figured and described in Hovey's Magazine, the Genesee Farmer, and the Horticulturist. It is medium or rather large in size, roundish-conical, often slightly flattened, nearly the whole surface handsomely mottled and striped with full clear red, flesh white, tender, very juicy, with a fine, spicy, sub-acid flavor; when well ripened, first rate. The young trees are of remarkably slow growth. Although a fine variety, it is not equal in richness to the Gate, Fall Pippin, or Gravenstein, but is much admired for its juiciness and fresh, sprightly flavor.

Leland's Spice, *or Leland's pippin.*[*]—Of excellent quality and great beauty of appearance, and cultivated so far as we know, only in the vicinity of Worcester, Mass. It is large, roundish, slightly conical, obscurely ribbed, very fair and smooth, with brilliant red streaks on a bright yellow; stem half an inch long, in a narrow, ribbed cavity; calyx in a ribbed basin; flesh yellow, tender, with a fine, spicy, sub-acid flavor—the New-England Farmer says "a high strawberry like flavor." It is a good bearer alternate years, and is decidedly a first rate fruit. We are indebted to S. H. Colton for specimens from Worcester.

Preserving Buds and Grafts.

The mode first suggested to us by T. G. Yeomans, of Walworth, N. Y., of preserving the scions of fruit trees in moist saw-dust, has proved superior to any other. It is better than damp moss, in the facility with which the scion may be perfectly imbedded in it, leaving no interstices; and it excells moist sand, in being lighter, more spongy, and entirely free from a grit which may injure a knife. We have without any difficulty preserved scions, which were cut in the summer for budding, till the following spring, and inserted them as grafts with entire success; and we have kept winter-cut grafts till midsummer perfectly fresh, and employed them successfully in budding. A bushel of saw-dust will retain its moisture for many weeks nearly unaltered; but water must not be applied too copiously, or water-soaking and decay will be the result. The north side of a building, or a cool cellar, is the best place.

Salt for Celery.

Plants of Celery were exhibited the past season, at a meeting of the Cincinnati Horticultural Society, to show the benefit of salt as manure for this vegetable. Those without salt, treated in the ordinary way, were not unusual in size or quality. The root and plant of the other, which had received the benefit of salt, was fourteen inches in circumference and weighed fourteen pounds without the leaves, and of excellent quality.

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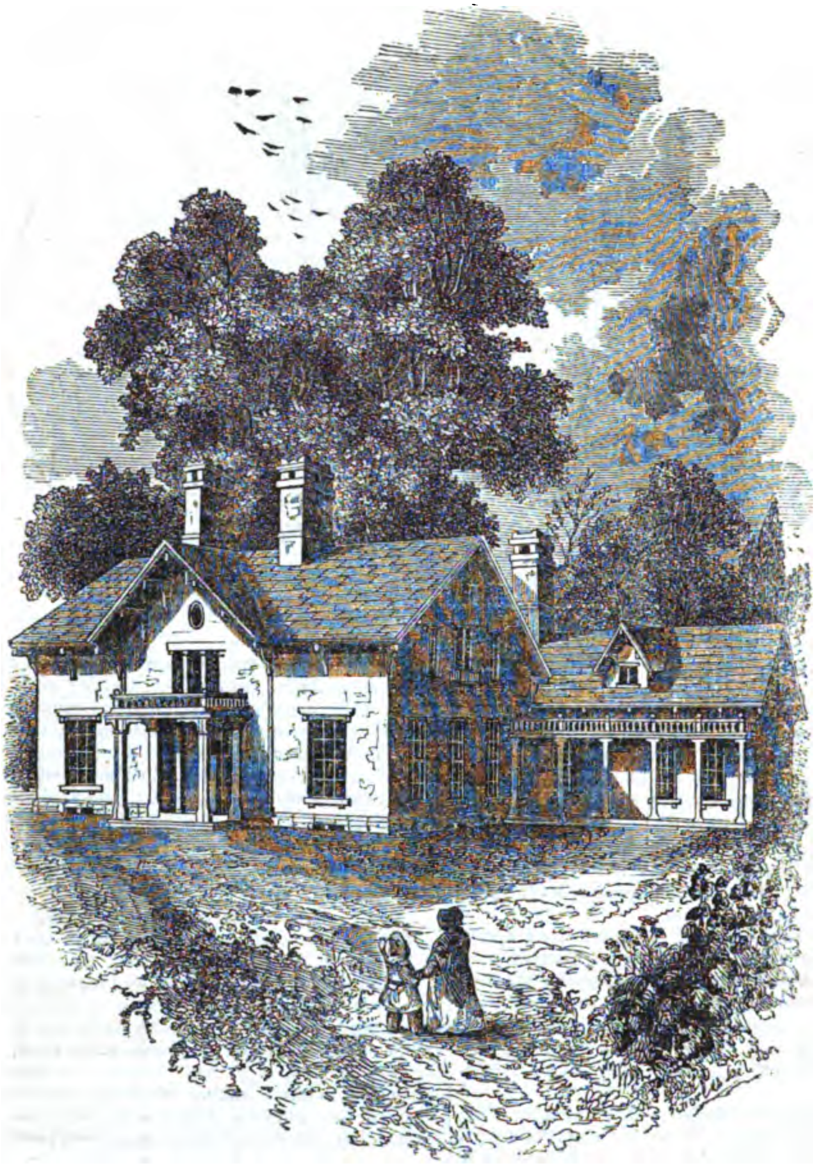
[*] The Editor of the New England Farmer remarks, that as this is a *red* apple, it should not be called a *pippin.* What is the meaning of the word "pippin?" we have more than once asked the question, and have not received an answer. It cannot refer to the shape,—for the American and the Downton pippins are flat, while the Ribston and and Sugarloaf are conical; it cannot indicate size, for the Downton and Golden are very small, and the Fall and Monstrous pippins are very large; color is not regarded,—for the Newtown is green, the Golden is yellow, and the Ribston and King of the Pippins are red; nor season,—as the Summer is early, the Newtown late, and the Eastern pippin "keeps two years;" nor flavor, the Blenheim being sweet, and the Ribston acid, &c. We should therefore be glad to see a good definition.



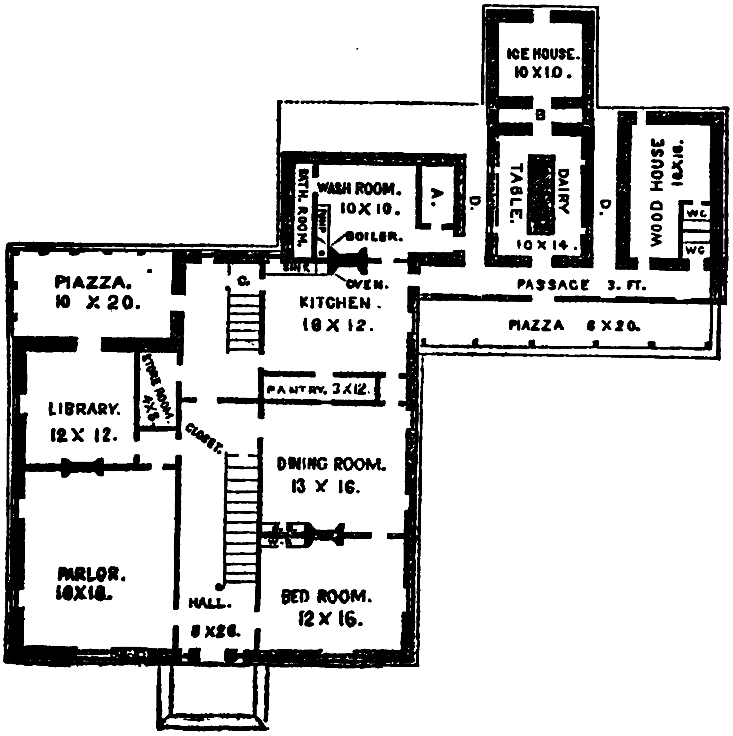
PLAN OF A FARM HOUSE.

The accompanying plan received the premium of the New-York State Agricultural Society, at the January meeting, 1848. The main object of the projector has been to furnish the best *ground-plan* for a complete farm house. The style of finish being regarded as a secondary matter, may be chosen according to the taste and circumstances of the builder. The representation here given, is ornamental, and at the same time compatible with convenience and comfort.

The committee on Farm Dwellings, &c., in submitting their report, make the following remarks in reference to this design: "The ground plan gives an excellent and convenient arrangement, which could not be better described than in the lady's own words. The committee would say one word on the mode of warming houses by means of heated air from a furnace, which is adopted in the plan offered. The same correct notions of conveniences and comforts, that suggested in the plan many of its arrangements, also suggests this most effectual, most economical and least dangerous method of throwing a summer heat into all parts of even a large building. This supercedes all fires, excepting that essential bed of living coals in the kitchen."

We extract from the *Transactions*, the following description of the plan.

The accompanying plan is designed to front south, with an elevation of thirteen feet from the sills to the roof. It should occupy somewhat elevated ground, sloping a little to the north, and should be raised on an underpinning to suit the ground. To give chambers to the size designated, the apex of the roof should be not less than twenty-two or twenty-three feet above the sills. It is highly proper to leave a *space* for air, between the finish of the chambers and the roof, which will prevent the rooms from becoming heated in summer.



Ground Plan.

The site should be selected with a view to the easy construction of drains from the sinks, bathing house, dairy, &c. directly to the piggery or barn yard.

It is of course expected a good farmer will have a good cellar, and in some situations, the best way of warming a house is by a hot-air furnace in the cellar. The size of the cellar and its particular divisions, should of of course depend on the wants or circumstances of the builder. In some cases it may be expedient to have it extend under the whole of the main body of the house.

It may be observed, however, that it is not advisable to store large quantities of vegetables under dwellings, as the exhalations from them, especially when unsound, are known to be decidedly prejudicial to health. Hence the *barn cellar*, and not that of the dwelling house, should be the repository of such vegetables as are wanted for the use of domestic animals.

Directions in regard to warming houses by furnaces, may be found in works relating to the subject, or may be obtained from persons engaged in their construction. There are various modes; but my own experience does not enable me to decide upon their relative advantages.

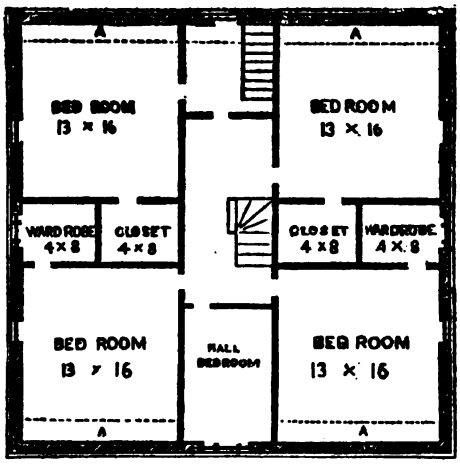
In the construction of this plan, it has been my object to combine utility and beauty, as far as practicable with the *labor-saving* principle. In the arrangement of the kitchen and dairy, particularly, special regard has been had to securing the proper requisites for those important departments with the greatest practicable degree of convenience.

In constructing a dairy, it is proper that such an excavation should be made as will leave the floor, which should be made of stones, two or three feet below the surrounding surface. The sides should be of brick or stone, and plastered; the walls high, and the windows made so as to shut out the light and admit the air. The advantage of *thorough ventilation* and pure air is acknowledged by every one who has ever paid attention to the manufacture of butter, though it is a matter generally too little thought of, in the construction of apartments for this purpose. It will be observed, that in the plan herewith submitted, an open space of two and a-half feet has been provided for on three sides of the dairy.

To render the establishment as perfect as possible, the command of a good spring of water, which may be conducted through the dairy-room, is necessary; when that cannot be had, an ice-house in *direct contact*, (as in the accompanying plan,) and a good well of water convenient, form the best substitute.

The expense of such a house in this vicinity might be varied from fifteen hundred to three thousand dollars; according to the style of finish, the taste and ability of the owner, &c. The main conveniences may be retained at the lowest estimate, by omitting the ornamental front.

M. W. Howard.



Second Floor.

Composition of milk.—According to Johnston, every hundred pounds of milk contain about half a pound of salines; the 100 pounds contain about 10 pounds of solid matter, and the proportion of ash in this solid matter is about one-twentieth of its whole weight, the analysis of which is given as follows:

Phosphate of lime,	23 1
Phosphate of magnesia,	4 2
Phosphate of iron,	0 7
Chloride of potassium,	14 4
Chloride of sodium,	2 4
Free soda,	4 2
Total,	49 0

THE FARMER'S NOTE BOOK.

To Farmers.—No. III.

No greater inconsistency is presented in the whole system of our Common School education, than in the want of studies suited to that part of our population engaged in Agriculture. Three-fourths of the whole number attending our Common Schools, eventually resort to Agriculture as the business of life, and nine-tenths are either directly or indirectly engaged in farming or gardening at some period of their lives. And yet, in most of these schools not a single study is adapted to prepare the scholar, or inform him, upon subjects immediately connected with this pursuit. The whole instruction appertaining to this subject, usually obtained by our farmer's sons, before called upon to act for themselves, is that derived from the labor exacted from them at home, during their minority, and their knowledge of farming is generally limited to the experience and the practice pursued by their parents and guardians. Too often now, it is to be feared, the child looks upon the employment, as a mere servile labor, rather than a pleasant occupation, and one of all others, best suited to his happiness. Being entirely ignorant of the first elements of Agriculture, as a science, he scarcely knows for what end his labor is bestowed.—"As the twig is bent the tree is inclined." Were this maxim properly acted, the first efforts would be to give children early instruction in some simple and appropriate studies, suited to the business of Agriculture, so that they might labor understandingly, in whatever they should be called upon to do in these pursuits, when young. The effects of such education would soon become manifest, and the instruction so acquired, would be of incalculable service to them in after life. With the knowledge of the necessary means to be used to make, and keep, their lands fertile, a large increase of produce might be realised from the improvement of them, and the increasing demand for market, be more certainly met and supplied; and we should see fewer persons willing to leave their present comfortable homes, and encounter the hardships incident to the removal to a new country, in anticipation of improving their condition. An Agricultural education is daily becoming of more and more importance to all who remain in the older settled portions of our country, to enable them to compete with the surplus productions of the rich land of the west. As a means of judging of the capability of many of our lands to produce a very large increase upon what they now do, let any person look into his own neighborhood and he will find no difficuly in selecting fields producing from two to three tons of grass per acre, while perhaps the adjoining field, no less capable of producing the same amount with proper culture, now scarcely yields a ton per acre, and so of other crops. In the reclaiming of low and wet lands, by means of draining, a large amount of productive land might be added to that now cultivated. There are not wanting many examples in our own state where, by means of judicious draining, large tracts of land have become among the best of our farming land. Part of the land formerly known as the Canastota Swamp, is a marked example of this kind. The renovating of old and worn out lands, that have been plowed for a long succession of years, by deep tillage and proper manuring, would be another means of greatly increasing the agricultural productions of our farmers. Many instances of this kind are familiar to those acquainted with the lands along the Mohawk river. When our farmers shall generally be so educated, that they can with a knowledge of the Science of Agriculture, put forth their energies to accomplish the end desired, we shall be disappointed if the results anticipated by such an education, do not fully meet the most sanguine expectations of its most zealous advocates. Oneida.

Spare the Spider.

I like the spirit of the article which appeared in the June Cultivator, inculcating kindness and attention to birds and toads for their usefulness in the garden. I desire to say a word in behalf of another useful friend of man, but whose friendship is met with almost unrivalled enmity and ingratitude. I mean the *Spider*. I do verily believe that, without his ceaseless vigilance, his untiring alertness, his wary cunning, his sagacious ingenuity, his fierce daring, and his voracious destructiveness, *it would be impossible for man to get enough out of the earth to save himself from starving!* Look at your garden and your fields, and see the endless variety of them, and their countless numbers, constantly in pursuit of prey, which they devour with unappeasable voracity, and say where would be the end of the ravages of pernicious insects if it were not for their relentless war upon them. And yet, there is not one man in five hundred, on finding one of them in his way, who, instead of touching his hat to him and giving him the walk, will not waste strength enough to knock down a steer in smashing him out of existence. They are sacred in *my* household, spiders are. If they accept the invitation of open windows, and walk into the parlor, and set up shop to the blemishment of good housewifery, they are considerately taken upon a broom and waited upon to the door, with thanks for their good intentions and regrets that their services were not wanted in that department, and a friendly suggestion at parting that they can do a better business elsewhere. But they are tolerated in the kitchen in a sly way, on account of the love they have for the society of that enticing little creature, the house-fly. I teach my children to destroy ruthlessly, almost every other creeping or winged insect, but to *spare the spiders.*

There is the large, round bodied spider, who suspends his circular net vertically in every angle about the house and out houses—a lazy old fellow to look at, but woe to the flutterer that touches his toils. The house-fly is the special object of his regard, and hence he is seldom found far from dwellings. There are many varieties, large and small, which adopt his mode of entrapment. Splendid specimens, in size and variety of decoration, abound in the woods and meadows, whose nets are almost tenacious enough to hold a bird. The largest kind of bugs and grasshoppers fall an easy prey to these.

Then there is the *garden spider*,—so called, I suppose, because he is found indiscriminately and abundantly around every dwelling, and barn, and wood, and field—with long slender legs and body, the latter faintly striped with buff down the sides. He spreads a compact sheet, horizontally, with well formed tubular avenue leading to his dungeon, at the entrance of which he grimly awaits the approach of some thoughtless wayfarer, who is dragged into it with inconceivable rapidity the instant he alights upon the tempting surface. He is not particular in his diet.

One of the most interesting of the race, is the small *transversely-striped spider;* very properly, from his appearance and mode of seizing his prey, called the *tiger spider*. You have seen him on the sunny side of a building before now, on the alert for insects which resort there for warmth and pastime. Here is one now, a fly has just settled within a few inches of him. You scarce saw the instantaneous motion with which his head was presented to his game as it alighted. Mark the oily, sidelong movement with which he gains a place above him, and now see the cautious, stealthy, almost imperceptible motion with which he advances—nearer, nearer—there! a leap of eight times his length, and he has him! Was ever anything more tiger-like?

But there is another chap who most excites my admiration. He is a small brown fellow with a light body and long legs; and he has a peculiarly pert way of standing on the very ends of his toes, bearing his body high up. He is the true sportsman of his race. He scorns the adroit stealthiness of the last, and holds all devices for entrapping his game in infinite disdain. He takes his position on a standing board, or in the garden walk, when the sunshine falls thick upon it, and as the creature of elegant leisure drops down to enjoy a moment of luxurious repose, he darts upon him with the celerity of lightning, and with an assurance of success, that seems utterly unconscious of the possibility of failure,—it scarce mattering what degree of space intervenes. I have rescued his victim almost on the instant of his seizure, but he was stone dead. Venom as virulent as the scorpion's, had pervaded his system.

There is also a spider of magnificent proportions, robed throughout in richest black or dark brown velvet. He roams everywhere. I have seen him in the woods, bearing off a centipede twice his own size, with the royal air and ease of a lion conveying a stag to his quarters. He is fierce, fearless and indomitable, and is said to hold equal combat with the toad.

My attention was once arrested by a small, compact irregular mass of dirt, moving off upon the floor with mysterious alacrity and regularity. On examination, I found it to be a small spider, whose body had a peculiar glutinous secretion, to which particles of dirt and sand adhered—thus effectually concealing his personal attraction. I have never but once since met with this curiosity. Doubtless many a young rat among insects has rued the day that he mistook "that white heap yonder" for something as harmless as "meal."

All these, and an infinite variety of others of this active and intelligent race, are constantly laboring for the welfare of man. Again, I say thee, SPARE THE SPIDERS. J. C. H.

Syracuse, 12th June, 1848.

A Rhode-Island Premium Farm.

Mr. THOMAS ANDREWS, of Smithfield, obtained the premium offered for the best cultivated farm, by the Rhode-Island Society for the Encouragement of Domestic Industry in 1847. The committee who examined this farm speak of it in high terms. It had been in the possession of Mr. ANDREWS ten years, and the committee say, that having been familiar with it in former years, they "were not less surprised than gratified with the striking change that has been effected by its present owner." They say further—"The farm throughout shows skilful, sound, and clean husbandry; the buildings are nearly all in excellent condition, and the many contrivances within doors, and without, for abbreviating labor and economising time, for the comfort of the family, and for the humbler tenants of the stable and the sty; and especially, the arrangements for the collection and preservation of everything that can be converted into manure—all indicate the orderly, pains-taking and industrious farmer; and show that while he keeps a steady eye upon everything that can be turned to profitable account, he is not unmindful of the higher duty of rendering his home agreeable and respectable." In regard to Mr. A.'s mode of feeding his animals, the committee remark that he has gone on the "sententious advice of an experienced old farmer, '*feed high.*' He has always acted upon this plan. Every animal upon his premises, biped and quadruped, is well fed and full fed. His cattle are not lank, hide-bound, costive and cross, but fat, sleek and kindly."

We make the following extract from Mr. ANDREWS' statement to the committee:

"My farm contains 113 acres. There are about 50 acres of arable and reclaimed land, 30 acres of pasture, and the balance is mostly in wood.

"When I bought the farm, the buildings and fences were out of repair. The land had been so long cultivated with very little manure, and that probably applied in the hill, it was in a very poor and run down condition. There were not more than two cords of manure on the place. The first summer I raised 40 bushels of potatoes, and 60 of corn. I kept four cows, a pair of three year old steers, and two horses, but was obliged to buy three tons of hay to carry them through the winter. Since that time, I have depended upon the resources of the farm and stock for manure, except two hundred and nine dollars worth of stable manure, and about two thousand bushels of ashes which I have bought. The present condition of the farm will be sufficiently indicated by the following enumeration of its products the present year—the prices are such as I have actually sold the articles at, or can now command for them.

80 tons of good hay, from 30 acres, 12 acres yielded 36 tons, $14, ...	$1120	00
3 tons swamp hay, $5, ...	15	00
8 " oats, on 4½ acres, cut green for fodder, $12, ...	96	00
2 " rye straw, $6, ...	12	00
Corn stalks and husks from 5½ acres, ...	50	00
283 bushels Indian corn, $1, ...	283	00
32 " rye, $1, ...	32	00
600 " Potatoes sold, averaging 65c., ...	390	00
400 " " on hand, have been offered 75 c., ...	300	00
90 " " small, 25 c., ...	22	50
1000 lbs. winter squashes, 2c., ...	20	00
87 bushels winter apples, ...	36	00
3 " quinces, ...	6	00
29 loads pumpkins, ...	29	00
7 bushels white beans, ...	10	50
Small fruits, $15.74, ...	15	74
Sweet corn, $5, ...	5	00
43 bushels fall turneps, 33 c., ...	14	19
Garden vegetables, of various kinds, ...	25	00
	$2481	93

"I now keep 4 oxen, 12 cows, 2 horses, a bull, 20 shoats and 2 hogs.

"The following answers to your queries will show my mode of cultivation.

"1st. Depth of Plowing.—I plow 8½ inches in all cases where it is possible, and in some loamy soils deeper.

"2. I used the subsoil plow last year on a field of 6 acres; subsoiling 4, and leaving 2, as an experiment. I plowed with a common plow, 7 inches deep, and followed with the subsoil 20 inches—stirring the earth 27 inches—sowed oats and grass seed. The *oats* were very large, on all the six acres, averaging 5 feet high, and there was no perceivable difference in the oats by subsoiling.*

"3. Rotation of Crops.—I find planting Indian corn more than one year on the same land makes but little difference to the crops, but almost every other kind of grain does not do as well. Rye is more apt to blight, and potatoes are sure to fail the second year. I have not generally got more than half a crop from second year's planting.

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* The grass was a week later on the part of the field that was subsoiled; there was less clover, but more herds grass and red top; the yield of hay was somewhat greater.

"4. Indian Corn.—I cultivated for five years the *white* cap corn of medium size, and deep plowing and manure caused it to grow larger and later. I also tried the *yellow cap* corn, but I find the white to have less weight in cob, and more fodder than the yellow. Last year I planted two acres of the white and yellow mixed equally, and found the result was in favor of the *mixed* corn. It was heavier than either white or yellow, by three-fourths of a pound to the bushel. I generally plant green sward, plow late in the spring, as plowing in the fall by freezing and thawing, the soil becomes wasted by winds blowing, &c. By plowing late in the spring the corn is never injured by the grass worm. I plant my ground but one year if I can get the sod rotten enough to seed down. If I plant two years, I plant potatoes first and corn afterwards, as the land will decidedly take seed better after corn than after potatoes—but by planting only one year the grass crops will last longer than if planted two years. I plow in the manure about the middle of May, roll with a heavy roller, and mark the rows with a light plow 3½ feet by 3, and put five grains in a hill, at second hoeing, leave four the healthiest plants to grow. I hoe as soon as the corn will admit—hoe three times. Work with cultivator between the rows, twice hoeing, but at the third hoeing it breaks down too much corn to work a horse between the rows. I make no hill, but keep the surface as level as possible, that the brace roots may hold it from blowing down, as in hilling the brace roots cling to the hill and are torn up easily, and if the season be dry, it is much more liable to suffer from drought. I commence cutting the stalks, as soon as they are ripe enough to cut for the milch cows, and continue using them for feed till they become too dry, as they are worth double to feed green, than in the winter when dry. By this method of cultivation I raise from 40 to 70 bushels per acre, and sometimes even more."

Preservation of Animal and Vegetable Substances.

A valuable process for preserving various substances, is noticed in the English papers. It consists, 1. In an improved method of applying rapid currents of heated air to the drying and preservation of vegetable substances. 2. An improved method of applying rapid currents of heated air to the preservation of meats.—3. An improved method of applying heat to the preservation of the edible matter contained in eggs.

Vegetables, such as carrots, turneps, parsnips, &c., are first washed and scraped, then sliced by hand or machinery, and laid in thin layers on trays with hair cloth or lattice work bottoms, and the trays placed on racks, one above another in the heating-chamber. When thoroughly dried they are to be put up in packages; or before packing they may be reduced to a fine state;—but the packages should in all cases be air-tight. Potatoes are preserved by first boiling or steaming them, and after being peeled, reduced by mashing or otherwise to a state fit for spreading in thin layers, upon trays of the same description as those employed for the articles above named. The trays with the substance are exposed to currents of heated air, at a temperature of about 150° (Fah.) till the substance is thoroughly desiccated. If the substances are of small size, such as peas or beans—they are exposed in their entire state to the rapid currents of heated air.

Meat, when bulky, is first cut into slices of about half an inch thick—the slices hung on lines or nails, exposed to the currents of heated air—the temperature 120° to 160°. All moisture is by this means completely expelled from the meat, and its albumen at the same time, firmly coagulated. Meat which has been so treated, will continue for a long time, under ordinary circumstances, in a perfectly wholesome state; but if it is intended to be exported to damp or variable climates, it is recommended to apply a little highly-diluted pyroligneous acid, or some other approved antiseptic, to prevent it from reimbibing humidity; after which it should be subjected to a further heating in order to free it from any moisture it may hold. To ascertain when the meat is perfectly dried, a portion of it may be weighed at intervals, and when it ceases to show any diminution of weight, the process may be deemed complete.

To preserve eggs they are taken from the shells, the white and yolks intimately mixed together, and about an equal weight of wheat flour, ground rice, or other farinaceous substance, is added to them, and the whole beat into a uniform mass, which is spread upon trays of horse-hair cloth or lattice-work bottoms. The mass is then exposed to a temperature of about 180°. When thoroughly dried, the mass is reduced to the state of flour, and in that state packed up for use. The eggs may be preserved in their entire state, denuded only of their shells, the yolks and whites being dried and reduced to a state of flour without any intermixture with other substances.

Cultivation of Forest Trees.

The natural scarcity of timber in some sections of this country, and its prodigal waste and destruction in other sections, have already occasioned the necessity of artificial plantations. This mode of producing forests has long been successfully practiced in England, and some trials which have been made, lead to the belief that its results would be equally as favorable here.

In the Transactions of the Essex (Mass.) Agricultural Society for 1847, we find a valuable essay on the Cultivation of the Oak ond other Forest Trees, by G. B. Perry. This essay received a premium from the Society. We present the following abstract of the principal points set forth by Mr. P. His remarks are chiefly confined to the cultivation of the oak.

It is recommended that acorns for planting should be taken from trees of the right kind, which stand at a distance from other oaks of a different kind. This is important on account of the hybridization which takes place when the different kinds grow near each other. Mr. P. thinks there is scarcely any tribe of forest trees in which this process is carried on to that degree as in the oaks.

The kind of oaks deemed most proper for cultivation, are the white, grey, yellow and black. Each of these has its peculiar properties, and is calculated for purposes for which the other kinds do not answer so well.

In regard to the questions, how the acorns should be managed for planting, and whether they should be planted in the fall or spring?— Mr. Perry, after fully considering the various modes, decides that it is best to gather the acorns as soon as they are dropped, put them in a box with earth and let them freeze hard; after which they should be kept till spring in a cool, shady place, covered thick with straw.

The question has been considerably discussed whether young forest trees should be cultivated—that is whether the ground should be loosed around with the plow or other implements; Mr. P. is of opinion, that when "the *right* culture" is bestowed, its effects are equally as useful on the "wild trees of the forest, as on the reclaimed ones of the orchard." In attempting the cultivation of the oak, injury has sometimes been done by breaking off the roots and otherwise mutilating the trees. Care should be taken in this respect—especially that the implements do not run too deep.

It is advised that trees should be cultivated in a nursery till they are five or six years old, and then transplant them to an open lot. Mr. P. thinks it is not unlikely that they may sometimes be kept in the nursery with advantage till they have attained the age of ten or twelve years.

In regard to heading down, pruning, &c., Mr. P. observes that from what observation he has been able to make, he is convinced that the top first thrown out almost invariably dies, "either before or after a new sprout from near the earth starts forth," and he thinks the process of nature is only seconded by art, when the top of a seedling oak, whether in the field or in the nursery is taken away to facilitate a better shaped and more vigorous growth. He has had long experience in raising trees of different kinds, and he is confident of the advantages of this process. He observes "I have in my nurseries but few trees which I supposed would not be improved by removing the top after having attained the age of three or four years. I have sometimes judged it necessary to subject them to a second and in some instances to a third process."

In regard to the question; how long it takes an oak to reach its ordinary growth? Mr. **Perry** observes that there are not enough well attested facts to enable him to speak with definiteness. He thinks particular inquiry should be made in reference to this point. One instance, however, is mentioned, which is worthy of notice. Four oaks, forty years old, stand on the side of a hill—the soil a sandy loam. The largest is estimated to contain over a quarter of a cord of wood.

"Of the general fitness of our soil for the production of the oak in its full size and greatest strength, we have pleasing demonstrations in the majestic trees of this species which still remain scattered over most of the country, as well as in the safety with which our own majestic ships, built of our wood, and fashioned by the wise craftiness of our own men, have resisted and out-lived the mighty lifting up of the ocean wave."

The general advantages arising from planting forest trees are thus summed up in concluding the essay:—"If we value, therefore, the wealth or happiness of those who come after us, or regard the estimation in which we shall be held by those whose gratified feelings and kind remembrance we wish to secure, we can take no more wise and sure course than to cover our hills, ornament our plains and fill our valleys with a rich proportion and pleasing varieties of the forest trees. Mixing those that put forth their freshness in the spring, with those which by their evergreen foliage maintain in the winter season, a pleasing contrast with the whiteness of the drifting snow. With such an inheritance handed down to them, our children's children made glad by the glory and beauty which they see around, will say that we, their fathers, were a wise and understanding people."

Effects of Ashes.

Messrs. Editors—Last fall I had a compost heap of manure and muck in preparation for covering my seed-beds of plums, apples, pears, &c., and a quantity of corn-stalks and weeds were thrown on the top of the heap and set on fire. A shower came up and we left it, but the top of the heap being quite dry, it kept burning all night and half of next day. The ashes were spread over a part of a long bed of plum stones in my nursery, and the effect is visible to this time, the young trees looking darker and are much larger than the others where the unburned compost was put. Still they had the ashes of a larger quantity than was given to the rest, though when applied I thought them worthless, and only put them on as an experiment. **Charles Hamilton**. *Canterbury, N. Y., July* 10, 1848.

Comparative weight of good and poor milk.

Having frequently heard various opinions expressed in regard to the comparative weight of good and poor milk, and having never seen an account of its being tested, I resolved to try the following experiments:

9¼ qts. cream, 19 lb. 2 oz., which made 11¼ lb. butter.
9½ " N. milk, 19 " 2 oz.
9½ " S. milk, 19 " 10 oz.
9½ " water, 19 " 2 oz.

Relative proportions of milk and butter.—By referring to my books, I find that in 1839 I made the following trial from four cows in two days.

Cow No. 1, 21qts. milk,	2lb. 1oz. butter,	1 4-7oz.	pr qt.
" 2, 23 "	1 13 "	1 1-4	"
" 3, 20 "	1 4 "	1	"
" 4, 18 "	1 12 "	1 5-9	"

About the same time I weighed a single quart of new and skimmed milk, each, and could not perceive any difference in the weight of so small a quantity.

Edward Clark.

Waterbury, Ct. July 1, 1848.

[The above is a good illustration of the fact that the quantity of milk does not indicate the quantity of butter it will afford. Eds.]

Chemical Names.

Substances in organic chemistry, the names of which are frequently used by scientific writers, explanations of which many readers may find convenient and useful.

Acroleon—the substance generated by the decomposition of fat, when highly heated, causing the disagreeable smell usually noticed.

Ambreine—principal ingredient of ambergris.

Amygdaline—a substance in almonds, peach-kernels, &c., yielding by decomposition oil of almonds and prussic acid.

Arabine—gum arabic,—forming with water, mucilage.

Camphene—the true oil of turpentine, obtained from common turpentine, and having power to unite with muriatic acid, forming what is called artificial camphor.

Caseum, or *Caseine*—the curd of milk.

Cerasine—chief ingredient of cherry gum.

Cerumen—wax of the ear.

Colophony—the compound rosin which remains when the crude turpentine from trees is distilled.

Dextrine—a gum, formed from the starch of seeds in vegetation—or by starch and sulphuric acid.

Faradyn—the lightest liquid known—weighing only thirteen-twentieths of its bulk of water—obtained by distilling india rubber.

Glycerine—a principle or constituent of all fats, and of their ingredients, stearine, margarine, and olein.

Inulin—starch from elecampane, dahlia, dandelion, &c.

Lactine—sugar of milk.

Legumine—extract of beans and peas, with properties intermediate between gluten and albumen of wheat.

Lichenine—starch from Iceland moss and other lichens.

Lignine—principal ingredient of woody fibre.

Palmatine—a peculiar stearine in palm oil.

Pyin—the liquid, which, united with albumen, forms pus.

Sinapisine—the pungent principle of mustard seed.

Stearine—a constituent of fats—most of them being stearine and margarine, with a simple oil, olein.

Tuebene—a liquid obtained from turpentine.

Xyloidine—a very combustible compound, formed by combining woody fibre with nitric acid.

Management of a Dairy Farm.

Mr. **Chauncey Beckwith**, of Columbia, Herkimer county, presented to the Agricultural Society of that county, in 1847, the following statement of the products and expenses of his farm for that year. It affords an excellent example of the advantage of system and economy, and shows what even a "slender man, not able to do heavy work," may accomplish, provided he has the MIND for it. We copy from the *Transactions* of the N. Y. State Ag. Society.

My farm consists of 100 acres, situated seven miles south of the Erie canal, and is about 900 feet above its level. I have 85 acres under improvement, on which I have kept 2 horses and 21 cows; 37 acres to pasture, 35 to meadow, 8 to oats, 2 to corn, 1 to wheat, 1½ to sowed corn, 8½ to potatoes.

Account Current.

Made 12,000 lbs. cheese, sold at 7 cts.,.... weighed in the fall and well cured.		$840 00
Sold apples, ...		40 00
do butter, ...		20 00
Calves' skins, ...		10 00
		$910 00
Interest on 4,000 pd. for farm,.....	$280 00	
do 400 do cows,....	28 00	
do 150 do horses,...	10 50	
do 150 do utensils,..	10 50	
	$329 00	
One hand 7½ months, $12,........	90 00	
Paid for days' works,.............	40 00	
do hired girl, 35 weeks, $1.12½	39 38	
do mechanics' bills,...........	20 00	
do shorts for cows,...........	20 00	
do plaster,..................	12 00	
do cheese boxes and bandage,	35 00	
		$585 38
		324 62
Permanent improvements, stone wall, &c.,..		50 00
		$374 62
Seed grain not taken into account, as it is the product of the farm from year to year.		
Family expenses, besides appropriating a portion of the products of the farm for such purposes,.......		120 00
Net profit,....		$254 62

I make this statement not for the purpose of boasting, but with a hope that other common farmers will be induced to make similar statements. It is believed that the statements usually made and published, are of farms in a very high state of cultivation, and if not extravagantly made, show a large yield and large profit, better calculated to discourage than to encourage farmers in moderate circumstances. The soil of my farm is gravelly loam, the timber mainly beech and maple, with elm and basswood, eighty acres under improvement; have kept cows two seasons: when I commenced, the farm had been for several years fed close by sheep, and was not in a good situation for keeping cows. My family consists of myself, wife, and four small children. I am a slender man, not able to do heavy work; have made the cheese and done some chores. Have kept my cows always in good condition; have fed hay usually during winter; when I feed straw, some meal is fed, so as to make the keeping equal to good hay; from about the first of March, I feed two quarts of corn or barley meal to each cow per day until the pasture is good; they are kept in good stables, and during summer are put up night and morning in a milking barn, near and convenient to the cheese room, and fed the whey with meal or shorts, the quantity depending on the situation of the pasture; commence feeding corn about the middle of August once a day, and the whey with shorts or meal once.

This fall after the corn was injured by the frost, fed a half bushel of apples to each cow per day, and late pumpkins, continuing to feed the whey, with shorts or meal, until they were dried off; have kept twenty cows for the dairy and one for the family. The yield of cheese per cow the past season, six hundred pounds, sold at seven cents; I think the extra feed, made at least one hundred pounds per cow; the cost of shorts was one dollar per cow; the meal being the product of the farm has not been in any manner taken into the account. The season has been dry and not favorable for dairying. I am convinced that good feeding pays well; the milk drawn from the cow is a monstrous draft, and if they are not well fed, they will run down and be poor in the fall, and the yield of milk small during the latter part of the season. The practice of sowing corn to feed in the fall, should, and I think will become general; if cows are well fed, they will be in good condition in the fall, which enables us to turn our old cows and such as are not good milkers, for beef to good advantage. I should put the cows up to milk if I did not feed; the trouble of feeding after they are up, is not great. The whey runs from the box in which the cheese is made, into a vat, and from that, by pump logs it is drawn into pails in the alley of the milking house. The cows being in two rows, with their heads to the alley, and a tub for each; the meal bin is at one end of the alley; from this to the cheese room, a distance of some ten feet, plank are laid to walk on, and a temporary roof over, so that we pass from the milking house to the room where the cheese is made, without being exposed to rain or mud; still this space is open for the circulation of air. I should feed my cows during summer, if it did not add to the quantity of cheese, as it is a satisfaction to see them look fine, and in knowing that they feel comfortable. Chauncey Beckwith.

Writers for Agricultural Papers.

There appears to be a desire among many writers and readers of Agricultural papers to interdict from the columns of the press all writers who are not rigidly practical men, and to my comprehension this is an error that should be discountenanced.

Are we to weigh every measure every thing by its mere worth in dollars and cents? True, a man may be practical in the growing of flowers, or the dressing of a set for a finger-ring or a breast-pin, and might be admitted on the one hand as practical, or on the other as one who has grown rich. Yet there may be others much better qualified to give directions than either the one or the other. Were a man required to teach one how to handle a spade or a hoe, then we might look for the practical man. Or were we giving lessons in making money, then the man who would best give demonstrations how to live on nothing, and spend no money for comfort or luxury, would be the man to look for.

The great bug-bear is theory; that is the stumbling block. Now this thing of theory is as essential to the thinking planter or farmer who desires improvement, as is any other thing. Hypothesis is quite another matter. The one lays down reasons from known premises, deduced from facts. The other assumes premises, and is too prone to be a dreamer.

The lamented Willis Gaylord, was one of the most cogent and able writers we have ever had, yet he was unable to practice the theories he had deduced from his early labors, which were even then limited from bodily infirmity.

I have been a tolerably close observer of men and things, and I think I should not err, if I said—as a *rule* laboring men are not in the main good at directing, nor are money-making men good managers. The first follows too much a routine taught him; the other has no other idea but saving. The first fears to try an improvement he never tested, a course of cultivation he never tried, a seed he never used, lest he might not do as well. The other will not lay out a dollar that he does not see the immediate return of. There are exceptions I admit, and when we meet the enlightened mind, then we should hold on to and encourage. But the idea as thrown out by one writer in an Agricultural paper, that money-making men, are the men who improve land and stock, keep up fences and buildings, and in short do every thing well—is a vain hypothesis. Let us go into any neighborhood, and we shall find men who are accumulating property, who wear out land, and live without much expense. Large crop makers, work at a heavy outlay of something, and the man who makes large crops has not the time to rebuild, or improve land.

Most men that have accumulated large estates, can not tell how they have grown rich—and other men who make large crops, cannot see why every body can not do so. The fact is, there are "vessels made to honor, and others to dishonor;" some men with one faculty and others with another; to make money comes as easy to some men, as the eternal waste comes to others. Let us hear from all, and though we may have to pick over a bushel of chaff to get a grain of wheat, yet we may be benefitted thereby.

I do not like this way of ruling off the track, all that have not the Flying Childers or the Eclipse blood in their veins; if agricultural readers only want to hear how they can make dollars, let them call up the misers from their dens, who can but tell them how many grains of corn will do to support life; and as they pay for the printing they have a right to control. As for me, this eternal weighing and measuring with a dime, I am sick of. I love dimes, but I do not want to eat them, nor to sleep on them, nor to measure a man's honor, nor his worth, nor his ability to advise me, by the length, breadth, weight or worth of his purse.

If I wanted legal counsel, I would not ask whether Daniel Webster was wealthy; if I wanted medical advice, I would not ask whether Valentine Mott could make pills fast. No, sir, I would ask—are they fully, sufficiently, entirely competent in their professions?

Why should not the principle prevail in agriculture? Why should not Dr. Daniel Lee be just as able to instruct in the best mode to conduct an estate, as any Jonas Smallbones in the land, though he might be born between the plow-handles? The instructor must have the faculty of communicating his views, and should by all means be thoroughly conversant with his subject—then, it matters not whether he be a doctor or a plowman.

There are many who are too much bound to their own views to examine others, or to give them a trial. Much of this natural (I may say) disposition is broken down by mixing with our neighbors—by education—yet it will hold to oneself in spite of him.

I consider myself a practical man, yet I have not hoed a row of corn or cotton in many years, nor turned a furrow, yet I am not considered practical by the majority, because I had the blessed advantage of having had a father who sent me to school and made me study.

I cannot accumulate property, nor do I have that sort of a desire: I see so many things I want, that I spend my dollars before I get them to jingle. Though I am not anxious to write for the press, and will gladly quit, whenever I see such a desire exhibited by even a tithe of the readers, I have vainly thought that, though I have sheep-skins enough to permit me to use the M. D. I might be of service to my fellows; if in error, I assure you and all others that I erred in judgment, not from any vanity. M. W. Philips. *Edwards, Miss., June* 10, 1818.

Time for Cutting Hay.

As the season has arrived for cutting hay, and as there is much difference of opinion in relation to the proper time for cutting it, I will just mention the course taken by one man in this mountain town. The man to whom I allude, is John Pratt, and he has managed a dairy of sixty cows for nine years; and in all that time he has not had a cow that has had the least trouble in calving, or cleaning, (as he told me himself) which I think something remarkable. Mr. Pratt's course is, to commence cutting his hay very early, generally before any body else thinks of it, or as soon as it begins to blossom; and he gets help enough to cut all his hay before it gets very ripe, and is generally one of the first to finish haying. He attributes his success with his cows, to *early-cut* hay, together with *careful attention* through the winter; and the rest of his stock corresponds in appearance with his cows. E. L. H. *Shrewsbury, Vt. July* 10, 1848.

Importance of Cutting Roots for Domestic Animals.—1. To avoid choking in the case of cows. 2. To secure better digestion of the food, and of course the better health and improvement of the animals, and the more economical use of food. 3. To save the teeth of the animals, more particularly the horse. This animal often refuses to eat roots, after having taken them freely for a few weeks, entirely, as I suppose, because his teeth have become sore. By frequently biting into roots of two or three inches in diameter, the gums become chafed, and the animal refuses to eat the roots.

Root Cutting Machines—A Cheap Substitute. I never felt the need of a machine of this kind although I have fed roots freely for many years. I use a box with a hard wood plank bottom. The size depends on the amount of stock to be fed. In such a box I crash them with a square headed mallet. Here are no knives to get dull or be broken by a stone among the roots. This box may be kept in your cellar in cold weather. All sorts of animals eat roots thus prepared more easily than when sliced in a machine; since by being left in grains by the mallet, and these grains often cohering, the animal can the more readily seize them than when cut by a machie.

Carrots vs. Oats for Horses.—I have worked a horse all winter long on *carrots* and *hay*, with better health, with equal effectiveness and with less expense than on *hay* and *oats*. All horses will not eat them readily at first, especially if mashed fine with a mallet. But all will soon learn; then they are never clogged by them. I think parsneps are equally good; certainly they are equally acceptable to the horse. I leave it to chemists to ascertain the relative proportions of starch and sugar, of phosphates and of nitrogenous matter in each. Carrots are the best root we have for late spring feeding, as they keep better than turneps and most other roots on the approach of hot weather.—With good hay and carrots the horse will hardly feel the want of fresh grass. C. E. G.

Structure of the Horse.—Sir Charles Bell obobserves that of all creatures the horse has the smallest stomach, relatively to its physical size. Had he possessed the quadruple ruminating stomach of the ox, he would not have been, at all times, ready for exertion; the traveller could not have baited his steed and resumed his journey. The stomach of the horse is not so capacious, even when distended, as to impede his wind and speed; and the food is passing onward, with a greater degree of regularity than in any other animal. A proof of this is that the horse has no gall-bladder.

Answers to Inquiries.

Osage Orange.—D. B. W., Mendham, N. Y.—The seeds of this plant may be first scalded by putting them in water near the boiling point, where they may remain till the water is cool, and then plant them in beds of good soil. Most of the seeds will vegetate the first season. The plants may be transplanted from the seed bed the second season, and may be set in a hedge form at the distance of a foot apart. They should be kept clean from weeds, and in the fall headed down to within two or three inches of the ground, and the growth of the next season cut to within fifteen or eighteen inches of the ground.

Eagle Plow.—G. B., Montgomery Co., Va. The Eagle plow is well adapted to strong soil; but our acquaintance with the Livingston county plow, is not such as qualifies us to say whether the former would be preferable for *all soils*. We should have no hesitation in recommending the Eagle No. 2 for "very strong lands."

Madder.—A. V. L., Newcastle, Del. Madder roots can probably be obtained in the fall from Mr. J. Eaton, of West-Winfield, Herkimer county. N. Y.—For his account of the cultivation of this plant, see Cultivator for 1847, p. 55.

Rose-bug.—"Fairfield County, Ct."—Where these insects infest small plants or shrubs, they may be shaken into vessels of water, and afterwards killed.—Where they attack large trees, as the apple or cherry, or grape-vines, they are more difficult to manage. R. Newton, of Worcester, Mass., states in the *Horticulturist*, that he had effectually driven them from his trees, where they appeared in great numbers, by scattering dry wood ashes among them, with a transplanting trowel or a shingle paddle. Turning up the ground under the trees or shrubs where they have appeared, with the plow or spade, late in the fall, will expose many of the insects to the frost and air, while they are in the larva state, and they will be destroyed. The eggs are deposited from two to four inches in the ground, and the insect passes the three first stages of its existence below the surface.

Quinsey or Sore Throat in Swine.—N. W. B., Nashville, N. C. It is not easy to determine what the cause of this disease is, in all cases. Allowing hogs to eat acorns of the black and red oaks, is thought to produce it sometimes. Physic the animal with salts and molasses—two ounces of salts with two table-spoon fulls of molasses for a dose. Or give a mixture of sulphur, charcoal, and wood-ashes, allowing the animal to eat the mixture at will. The salts and molasses, diluted with water, can be forced down the throat with a syringe.

Washing Machine.—J. F. L., Macon county, Mo. There have been a vast number of washing machines invented, but far the greater portion are known only among the things that *were*, and of those that exist, there are few of any real utility. We are not sufficiently acquainted with the different kinds, to say which is best. A friend uses one called the "steam rotary washing machine," which app ars to be quite effective, and does not wear the clothes—price $15. But we should be glad to learn from those who have had *actual experience* in the business, what machines are best on the score of utility and cheapness.

Multicole Rye.—In answer to several inquiries, we will say that a supply of this grain will be kept for sale by Mr. Emery at the Albany Agricultural Warehouse. We believe the variety sustains its reputation for productiveness.

Water in Barn-Yards.—"A Subscriber." There is no difficulty in bringing the water from a spring 30 feet higher than your yard, though there may be a valley between, ten feet lower than the yard, provided the water is confined in a pipe. The water would run by simply placing the pipe in the spring, but to insure its always being kept full, it would be better to raise a head by a cistern or vat. Pipe of three-fourths of an inch bore would be large enough to carry water for twenty head of cattle, or more, and lead-pipe would cost here from twelve to fifteen cents per foot.

Seeds of Thorns.—P. P. P., Bradford Co., Pa.—The seeds of thorns generally vegetate well, if they are well ripened. They are, however, slow in sprouting, on account of the hard shells in which they are enveloped. On this account it is common to scald the seeds by pouring boiling water on them just before they are planted. This causes them to vegetate much quicker than they would do if put in the ground dry. If planted without any preparation, they will not all come up before the following spring, that is, they will lie in the ground a year.

Clod Crusher.—C. S. W., Dutchess Co., N. Y.—We cannot say whether such an implement is made in this country. Mr, D. T. Burrall, of Geneva, N. Y., proposed some time since to make one on the plan of Crosskill's—the one noticed in the English papers—but we have never learned whether he has done so. We think it would prove a very useful implement on compact soils.

White Daisy, or "White Weed."—(*Chrysanthemum leucanthemum.*) J. B. Watertown, N. Y. Where there are but few plants of this kind, it is best to dig them up, root and branch. If meadows are overrun with them, prevent their seeding by mowing as soon as the blossoms appear. In tillage land, kill them as you would any other bad weed, and if they are very numerous, it is advisable to keep the ground in hoed crops for two or three years, during which, if due attention is paid, they may be nearly exterminated. At all events prevent their seeding, as it is from seed only they are propagated. If mowed green and well cured they make hay that is not disliked by cattle and horses. If they ripen, the seed falls to the earth and vegetates, or goes with the hay to the barn or stack, gets into the manure and is returned to the land. It is in this careless way that the pest is continually renewed and increased. Top-dressing meadows with manure that contains no foul seed, and in every way encouraging the growth of grasses and white clover, will, with the above precaution, drive out the daisy in a few years.

The Locust.—A correspondent in Chester county, Pa., asks whether any new light has appeared in regard to the natural history of the locust. The insect called by that name in this country is not a locust—the real locust being a very different insect, closely allied to the grasshopper—both being included by Linnæus in the genus *gryllus*. What is improperly called locust in America, belongs to the group *cicada*, its specific name being *septendecim*, from its period of life being seventeen years. In its character and habits it differs widely from the true locust. Except for a few weeks at the latter end of its existence, the cicada lives entirely under-ground, feeding on the roots of trees and plants. During the short time it appears on the surface of the earth, it eats nothing, and it does no damage to vegetation while in the perfect or winged state, except in furrowing the limbs of trees to form cavites in which to deposit its eggs. As soon as the eggs hatch, the insects leave the trees and pass into the earth, groping in darkness for the long period mentioned.

The locust (or grasshopper) lives but a single season—not in the ground but on the surface or in the air, and its ravages are committed on the tops (not on the roots) of plants. The dreadful havoc which has been produced at various periods by the locust, in some districts of the Old Continent, has given rise to considerable alarm in this country—the cicada above described being confounded with the true locust. But those devastations were produced by some of the grasshopper family. We have several species in this country which Dr. HARRIS calls locusts. What is commonly called the red-legged grasshopper, he calls the red-legged locust. It prevails extensively and is often very destructive to vegetation.

It is a well known fact that the *Cicada septendecim*, appears in different places in different years, though it is only seen on the same spot or in the same neighborhood, once in seventeen years. The fact is of great interest to naturalists, and we are pleased to see that it is attracting considerable attention.

Diseases of Animals.

HEAVES IN HORSES.—I have been acquainted with this disease practically for many years. I think it can never be cured, nor much alleviated by medicines. I am assured, on what I consider good authority, that removal to western Ohio is a certain remedy. I once drove a heavy horse twenty years old, through a journey, going and coming, of eleven hundred miles, in the months of May, June, August and September. The whole was accomplished with fair speed, and a good degree of comfort to man and beast, by the observance of one short and simple rule. *Avoid dust.* The manger and rack were usually dusted, the hay shook and sometimes watered, and the oats wet before the horse was allowed to approach them. "A good deal of trouble," says one. "Yes," I answer, "and a good deal of comfort, too, both to horse and traveller." The worst predicament was in travelling a dusty road with a light breeze blowing in the direction of the journey. Then the poor creature suffered, of course. C. E. G.

RED-WATER IN COWS.—We are informed by the Danville (Va.) Register, that not less than 300 cows have died in that vicinity, from the disease called red-water. It is a malady we have never met with, and we are not prepared, from our personal knowledge to "throw any light upon it." According to veterinary works there are two kinds of red-water—acute and chronic. *Cole's Veterinarian* describes the latter, (which is probably the kind above alluded to,) as follows:

This is most common in cows of weak constitutions, and in calves. In the first stages, it is far more a disease of the digestive organs than of the kidneys. The following causes are assigned: relaxed vessels; thin blood; cold; change from poor to rich pasture; luxurious pasture for cows recently dried, and scarcity of water in a long, dry summer. Some of these are only secondary causes, and there are doubtless various other primary causes, among which is the want of exercise.

Symptoms. The urine is of a brown color, or brown tinged with yellow. The beast feeds nearly as well as before, but ruminates more lazily. In a few days a natural diarrhœa comes on, and then the animal is well again; or a purgative is given and a cure is soon effected.

At other times the animal is dull, heavy and languid; the ears droop, the back is bowed, she separates from the herd, refuses food and ceases to ruminate. Again she is better, and then suddenly changes to worse; the urine assumes a dark color, resembling foul coffee or porter; it increases, in quantity, and is sometimes discharged with difficulty and in little jets. The milk diminishes, and acquires a tinge of yellow or brown, and the taste is unpleasant. The pulse is accelerated to sixty or seventy beats a minute. The skin is yellow, but of a darker yellow than in jaundice; it has a tinge of brown. The urine becomes of a darker hue, and is almost black. Sometimes the animal shrinks when the loins are pressed, but not usually, nor so much as in acute red-water. There is a loss of condition and general debility, and the legs and ears are cold. In every stage there is costiveness very difficult to remove, yet generally there was violent diarrhœa at the beginning, which suddenly stopped. The dark color of the urine is caused by vitiated bile, not by blood, as in acute red-water.

An examination, after death, shows that the contents of the *manyplus*, or third stomach, are perfectly dry and almost as hard as though they had been baked.—This is doubtless the disorder which many farmers call *dry belly-ache*; and some call it dry murrain. The liver is inflamed, and darker than usual; the gall-bladder is full to distention, and the bile is thick and black. These circumstances show that the seat of the disease is in the liver, and that the gall is obstructed in its passage to the intestines; and indigestion is the result.

Remedy. As in this disease constipation of the bowels is generally obstinate, back-rake, and give an exciting injection; then give a good dose of physic, with ginger, or other stimulant, and if there be no operation in six or eight hours, repeat, in half doses, and continue mild injections occasionally, until an operation of the physic. Give also warming teas, such as sage, peppermint, &c. Feed on laxative food, and give astringents, as for jaundice, to restore the digestive organs to their usual tone and action. We think that ashes and cider would be excellent. Saltpetre, in doses of an ounce, is good. Change the food, and remove all cause of disease. Small doses of sulphur are good.

BLACK-LEG IN CALVES.—At a recent discussion of this subject by a Farmers' Club in England, it appeared to be the general opinion that hay which was badly heated in the mow or stack, rendered calves which fed on it particularly liable to black-leg. It was agreed that they should not be stunted in their growth—should have clean, sweet fodder (or grass) with a little meal of some kind of grain, or oil-cake, and potatoes, turneps or carrots.

New-York State Ag. Society.

The Executive Committee met at Buffalo June 22d. They selected the ground and made other preparations for the Society's Show and Fair, to be held at that place on the 5th, 6th, and 7th of September next. *Superintendents* have been appointed to take charge of the different divisions of the show. It is expected they will be on the ground and will give proper directions in regard to placing and arranging the various articles and animals. This course will prevent confusion, and greatly simplify and facilitate the operations of the society.

A pamphlet containing the list of premiums, together with the names of the adjudging committees, and all the accompanying regulations, has been published, and may be had (gratis) on application to the Secretary, at the Society's room, Albany.

We are pleased to see that the people of Buffalo and the western portion of the state, manifest a praiseworthy spirit in advancing the objects of the Society. We confidently expect a superior display of the products of our own state; and owing to the favorable position of Buffalo for being reached from the Western States which border on the lakes, and also from the Canadas, we presume there will be a large turn-out of "men and things" from those sections; and in every aspect, we anticipate an exhibition creditable to the Society and the people contributing to it.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from A. V. L., D. B. Williams, A. C. Richard, Fairfield County, A. B., W. Bacon, Edward Clark, James Flore, A Subscriber, Dr. Charles Hamilton, W. N. Green, L. L. H., M. W. Philips, C. S. W., S. Smith, J. B., H. Grath, Jr., A. B.

Books, Pamphlets, &c., have been received, during the past month as follows: "Patent Office Report for 1847," and "Speech of Hon. J. I. Slingerland, on Internal Improvement, the War, and Land Monopoly," from Hon. Mr. Slingerland.—"Transactions of the Mass. Ag. Societies for 1847," from J. W. Lincoln, Esq.

School of Applied Chemistry.—We would call particular attention to the advertisment of the school under the charge of Profs. Silliman and Norton, at New Haven. The agricultural department is under the direction of Prof. Norton, who has been favorably known to the readers of the Cultivator for several years, and who, we are confident, has, by his writings, secured the approbation of the thinking, practical portion of the farming community. The school has been in operation for nearly a year, and we have heard it spoken of in terms of high commendation by those who are competent to judge of its character. It will be seen that Profs. S. and N. will undertake such analyses and investigations as may be entrusted to them.

Fine Raspberries.—We have received from Chauncey Copley, agent for the Society of Shakers, at Watervliet, some beautiful samples of the Fastolff, Antwert, Ohio ever-bearing, and Ohio yellow raspberries. They are all very fine kinds, and decidedly the best specimens we have seen this season. The Society is paying much attention to the culture of fruit, and will have the stocks of the kinds mentioned for sale this fall or next spring—together with the best varieties of the strawberry.

Walcheren Cauliflower.—We have recived from Mr. James Wilson of this city, a couple of very fine heads of this superior variety of cauliflower. It has lately been introduced here from Germany. There are two kinds—the early and late. That received from Mr. W. was the former. The seed was sown in the Green House, in March, and the plants set in the garden as soon as the state of the ground would permit. The heads were cut on the 30th of June—were very close and full, and of a quality and flavor unsurpassed. We have no doubt the variety will prove an acquisition to our list of culinary vegetables. In the *Horticulturist*, vol. ii, p. 463, Mr. Downing has very favorably noticed both the early and the late Walcheren cauliflower.

A good Horse.—A correspondent writes—"You remember my old bay horse. The other day I drove him a mile on the trot before a buggy with three men in it, fairly within four minutes, a measured mile. He is *seventeen* years old—is perfectly sound, and has done a hard spring's work at the plow. He was fat on grass, never had a mile of training—having been taken out of the pasture the night before. It was after having driven him seven miles, that I drove him between the seventh and eighth mile stones in the time mentioned."

Yield of Butter.—In the year 1844, six cows belonging to George Vail, Esq., of Troy, produced in thirty days, 262 lbs. 9 oz. of butter—averaging 43 lbs. 12 oz. for each cow. The same year Philip Van Benscoten, of La Grange, Dutchess county, produced in thirty days, from five cows, 227 lbs. of butter, averaging 45 lbs. 6 oz. for each cow.

Farmers' Club.—We are informed by Charles Betts, that a Farmers' Club has been formed in the vicinity of Redford, Mich., in which the farmers manifest a deep interest, and which has already been the means of awakening a spirit of improvement that cannot fail of being useful.

Wheat and Rye in Virginia.—M. Davis, Esq., of Lynchburg, Va., writes—"We have just cut a good crop of wheat—the best we have had in this region for several years. Rye was once thought the surest crop we could put in the ground; but for a number of years it has failed to such a degree that few persons sow it, and nobody seems to be able to tell the cause of the failure."

Foreign Wool Trade.—We have accounts from the great Breslau wool fair of June 9th. The whole quantity of wool offered was 59,000 cwt., 20,000 cwt, of which remained unsold at the close of the fair. The prices were considerably below those of last year. The best selected lots of Silesian (or Saxon) wool brought from 90 to 110 dollars per cwt.; the "fine" 60 to 68; the "middle fine," 50 to 55; and the "low" 26 to 30. The fleeces were prepared in the best condition.

Wool Trade.—The *British Farmers' Magazine*, speaking of the supplies of wool from the Western states, says, "Until they are got up with more care, better washed, and more evenly graded, we see little prospect of a profitable result."

'**Crops in Ohio.**—The *Ohio Cultivator* states that the wheat crop of that state is remarkably fine. Corn was, (on the first of July) backward. Grass not generally heavy—but pretty good. Potatoes promise a healthy crop—"especially where planted early." Fruit generally abundant. In the Western Reserve, the *rose-bugs* have injured the fruit trees very much.

Steam *vs.* Horse-power.—A gentleman has challenged the Great Western Railway Company to match a horse against a steam engine for half a mile—the engine to travel on the rail, the horse on the Reading race course parallel to the railroad. Speculation runs high on the issue. The editor of the *Mark Lane Express* offers to back the horse.

Turnip Meal.—A kind of meal made from turnips has been introduced in Scotland. It is made by passing Swedish turneps through a potato starch mill. After having been passed through the washing machine, they are ground down by the rasping apparatus, and the pulp is passed between rollers which squeeze out the greater part of the moisture. The squeezed fibre is then dried on a kiln and ground into meal by mill stones. The liquid which is expressed is evaporated, and the dry solid part is mixed with the meal. The meal therefore contains nearly all the solid parts of the turnip in a state which prevents decay, and in a light and portable form. It is confidently expected that this article will prove a good substitute for grain to feeding stock in that country. Prof. Johnston, on analysing it, found it to contain 13.68 per cent. of protein compounds, 48.72 of sugar, 4.14 of gum, and 1.11 per cent. of oil.

Saline food for animals.—The tissues of the body contain various saline principles, as soda, iron, sulphur, phosphorus, lime, &c. They are derived from the food and drink. The bones are formed in a great degree of phosphate of lime, and it is of the greatest importance that young animals, in particular, should be supplied with food capable of yielding this substance in proportion to the regularly increasing demand of the system. *Milk* is in this respect a perfect food, and may be said to be the most proper substance, that can be given. The effect of not duly supplying animals with their suitable food, may have been seen in pigs which were kept in pens, not allowed to come to the ground, and fed with weak slops and vegetables. Their bones are frequently weak, as is shown by their crooked legs, which are unable to support the body. Give them milk, and allow them an opportunity to take proper exercise, and they will speedily improve—the bones becoming firm and strong.

Soiling.—Sir John Sinclair in his "Husbandry of Scotland," remarks that "Milch cows give more milk when soiled than when pastured, provided due attention is bestowed in furnishing them with a regular supply of grass at stated periods—say six times each day—and keeping them clean and free from nastiness."

Cost of Fences.—Nicholas Biddle once remarked that the cost of fencing alone in the state of Pennsylvania, would pay the state debt, about forty million dollars.

A Rochester Mill in Spain.—John Eggleston, of Rochester, has furnished a model mill, to be copied in the erection of a flouring mill at Bilboa, in Spain.

Windham County, Vermont.—Next fair of the Agricultural Society will be held at Fayettville, on the 5th and 6th days of October next. The officers of this society are, Daniel Kellogg, President; Chas. Chapin, Emory Wheelock, Vice Presidents; Chas. K. Field, Treasurer; John Tufts, of Wardsboro, Secretary. A very judicious premium list has been published, and we presume the exhibition will be creditable to the intelligent citizens of the section.

Turneps *vs.* Potatoes.—Boussingault, in his work on Rural Economy, tells us in his "Elements of Crops," that the Turnep is the most watery root he has examined, and that by desiccation he found out of one hundred parts of fresh turnep, ninety-two and a half parts were water; whilst by a similar process he found that from one hundred parts of fresh potato only 76 parts were water. The elementary constituents of the two kinds of vegetables were very similar: according to these analyses of Boussingault's you will perceive that, weight for weight, the "raw" potato exceeds more than three times the nutritious properties of the turnep—or, in plain figures, 3.2 times.

Chemistry and Agriculture.—Within the last year or two, we have seen frequent notices of the investigations of Kuhlman, of Paris, in relation to the connexion of chemistry with agriculture. A volume has lately been published embracing the results of his researches on the subject. This we have not seen, but from a review of the work which we find in the Scottish Quarterly Journal of Agriculture, we learn that the leading object of the author was to ascertain facts in regard to the operation of substances used as manures. For this purpose he instituted a series of experiments with many different articles. The trials appear to have been fairly conducted, and with a sole view to the elicitation of truth. Some of the conclusions to which his results have tended are as follows:

That the value of manures may be ascertained by the quantity of azote or ammonia they contain: that the phosphates did not produce the same invigorating or stimulating effect as the azotised manures, though their action was more lasting than the latter: that there seems to be a limit to the beneficial action of ammonia, as a superabundant application actually decreases the produce.

The reviewer observes:—"Unlike many agricultural writers of the day, Kuhlman has drawn all his conclusions from experiment; he has not, like them, *commenced with his theory,* and twisted all his results to make them agree with the preconceived opinion. On the contrary the experiments are fairly tried; and the deductions so modestly drawn, that every reader must feel himself compelled to agree with them, notwithstanding they differ from the expressed opinion, that plants derive all their azote from the air. Against *this opinion* we may place the conclusion at which Kuhlman has arrived, from careful and laborious experiments, namely,—'That if the air can supply sufficient azote for vegetation, *we can double that vegetation by the addition of azote to the soil.*'"

The Wheat Crop at the West.—The *Prairie Farmer* of July, says—"The present prospect for the wheat crop, and indeed for all other crops, has not been better since the settlement of the northwestern country. Notwithstanding the ravages of the Hessian fly in the fall, and the damage done by the winter, there bids fair to be a tolerable crop of winter wheat, even in the most unfortunate districts; while in those not affected by these visitations, the present promise was never better. The proportion of good weather has been so large that fields which seemed past hope in the early spring, now promise a fair yield. Contrary to our expectations, the Hessian fly has hardly been heard of this spring. We looked for his disappearance after the present season, but did not anticipate exemption quite so soon. The prospects of the wheat crop, in the southern belt of the northwest, including a strip say three hundred miles wide, lying north of the south end of this State, has not been otherwise than good. Its present keeps pace with its past promises. The northern belt, extending from the southern extremity of Lake Michigan to the northern limit of Wisconoin, suffered more or less in the fall and winter, from the causes alluded to. Within this belt, spring wheat not only makes up for whatever deficiency there might be in the winter crop; but from past failures, has become a vast crop of itself. Perhaps so much of this was never before put in as the present season. Taking altogether, the dark shades are few and unimportant. Still there are many risks yet to be run. Through the State of Ohio, also, the crops never gave better promise. The corn crop is, if possible, fairer than the wheat, with us: and according to present indications, will be much larger than ever before May there be no disappointment.

A Cold Well.—A letter was lately read before the Natural History Department of the Brooklyn Institute, describing a singular phenomenon connected with what is called "the deep well," near the village of Owego, N. Y. It is seventy-seven feet deep to the surface of the water, and was excavated twenty-five years ago. Two years after it was dug, the water became frozen in the winter, and it has been frozen every severe winter since. Two years ago a lump of ice was drawn out of the well in July. In the month of June last there was only two feet of water, and its temperature was 40°

Californian Horses.—We have seen it stated that Com Stockton has taken measures to introduce to the United States, some of the breed of horses called *canalos*, with which Col. Fremont performed his wonderful feats in travelling, noticed in a previous number.

Farm of the Kings County Alms-House.—Attached to the Alms-House is a farm of 113 acres, 70 of which is the property of the County; the additional 43 acres have been leased for a term of 7 years, at $6 per acre, by the Superintendents. The products of the farm during the last year were as follows: Wheat, 190 bushels ; Oats, 360 bushels ; Corn, 1,100 bushels ; Potatoes, 1,100 bushels ; Beets, 390 bushels ; Turneps, 400 bushels ; Onions 150 bushels ; Flax, 300 lbs ; Cabbages, 3,500 heads ; Celery, 2,000 heads ; and a large supply of garden vegetables. Pork, 4,205 lbs ; Calves, 5 head. There was harvested also 86 loads of Hay and 20 acres of Wheat. There was made in the house, for the use of the inmates during the year, garment pieces No. 3,214 ; Stockings Knit, 624 pair ; Shoes made, 91 pair ; Shoes repaired, 118 pair ; Thread spun, 30 lbs ; Coffins made, 114 ; Iron Bedsteads for Asylum and Hospital, 43. The amount of stock on the farm on the 31st July, 1847, was—8 horses, 8 cows, 2 oxen, 1 bull, 62 swine, 200 poultry. During the year there were 32 births, and 111 deaths. The number of persons supported for the year was 7,185 ; number temporarily relieved, 5,955.—*Tribune.*

Notices of New Publications.

TRANSACTIONS OF THE NEW-YORK STATE AGRICULTURAL SOCIETY FOR 1847.

This is a volume of about eight hundred pages, comprising full details of the ordinary doings of the Society for the last year, together with Reports from most of the County Societies in the State. It contains also many valuable papers communicated to the Society ; among which are two from Prof. JOHNSTON, of Durham, (Eng.) one on the use of Bones as a Manure, and the other on the Composition of a Water found very useful in Irrigation ; an article on the Currant Moth, illustrated with a very handsome steel-plate engraving, by Dr. A. FITCH ; Agricultural Schools, by S. LUCKEY, D. D. ; Subsoil Plowing, by JOHN MALLORY ; the Potato Disease, by Rev. C. E. GOODRICH ; Silk Culture in America, by Dr STEBBINS, &c. The volume contains a great amount of really valuable matter. We have already given abstracts of some of the articles, and shall notice others.

VERMONT STATE AGRICUTURIST.—We have received the first number of a publication with this title issued at Burlington, Vt. As the name implies, it is to be devoted to the interest of agriculture, and for this purpose it will seek to collect and disseminate information of a practical and scientific character. It is announced that the services of Professor PHELPS, of Windsor, have been secured for the departments of Chemistry and Physiology, and those of Professor TORREY, of the University of Vermont, for the Botanical department. It is to be published monthly by CASPAR T. HOPKINS and D. W. C. CLARKE, the former of whom has the editorial charge of the work. We trust it will prove a useful aid in the good cause which it advocates. It is a quarto of sixteen pages—terms $1 a year.

AMERICAN JOURNAL OF SCIENCE AND ARTS.—The number of this work for July is received. As usual, it is filled with valuable matter relating to subjects belonging to its oppropriate sphere. We notice an interesting article on the variations of the level of lake Superior, by Prof. W. W. MATHER ; the Orbits of the Asteroids, by B. A. GOULD ; the Benificent Distribution of the Sense of Pain, by G. R. ROWELL, &c. Published at New Haven on the first day of every second month, at $5 per year. Edited by Messrs. SILLIMAN and DANA.

THE FARMERS' LIBRARY.—We learn from the June number of this work, that its title is to be changed to that of " THE PLOW, THE LOOM, AND THE ANVIL."—Mr. SKINNER, the able editor, has purchased the establishment, and has made arrangements with ZIEBER & Co., of Philadelphia, for its future publication. We do not understand that the plan of the work is to be essentially altered, except that it will more especially advocate a " cordial alliance and mutual support among all the great branches of American Industry." It is to be published monthly, at three dollars a year. We wish it success.

THE PLOW, THE LOOM, AND THE ANVIL.—Since the above has been written, we have received the first number of this work. It contains seventy-two pages, octavo, well filled with valuable matter. The principal portion relates to agriculture and various branches of manufactures, and to the relation they sustain to each other ; but there are several pages of useful information under the heads " Miscellaneous Scraps," " Readings for Mothers and Children," &c. The work is neatly printed and in all respects makes an attractive appearance. Edited by J. S. SKINNER & SON, and published by G. B. ZIEBER &Co., Philadelphia.

Domestic Economy, Recipes, &c.

To make good yeast in summer, is a desirable object with every housewife. She may have such by the following simple process:

Boil a single handful of hops (which every farmer ought to raise, to the extent of household wants,) in two or three quarts of water—strain and thicken the liquor, when hot, with rye flour ; then add two or three small yeast or turnpike cakes, to set the mass. If this is done at evening, it will be fit for use early next morning. Reserve a pint of this yeast, which thicken with Indian meal, make into small cakes, the size of crackers, and dry them in the shade, for future use. In this way the yeast is always fresh and active. Yeast cakes kept a long time are apt to become rancid, and lose their virtues. The fresher the cakes the better the yeast.

To make Currant Jelly.—Take the juice of red currants and white sugar, in equal weights. Stir it gently and smoothly for three hours, put it into glasses, and in three days it will concrete into a firm jelly.

GREASE FOR MACHINERY.—Oil, sulphur, and vulcanized caoutchoc, in composition, is said to be superior to any thing known.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, July 15, 1848.

FLOUR—Genesee per bbl. $5.25—Georgetown $6.

GRAIN.—Wheat, southern, per bu., $1 21—Ohio $1.12—Corn, northern, 53a54c.—Rye, 68c.—Barley 60a65c.—Oats, 42a43c.

BUTTER—Orange County, per lb., 16a18c.—Western, dairy, 14a16 c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $11.50a$12.00—Prime $6.12½a $6.50.

PORK—Mess, per bbl., (new.) $17.50—Prime, $8.12½a$9.12½

HAMS—Smoked Western, per lb., 5½a9c.

LARD—in kegs, per lb., 7a7¾c.

HEMP—Russia clean, per ton, 225a$230.—American dew-rotted. $130a$135.

HOPS—First sort, per lb., 4½a5c.

COTTON—Upland and Florida, per lb., 5a7½c.—New Orleans and Alabama, 5a8½c.

WOOL—(Boston prices.) July 15.

Prime or Saxon fleeces, washed per lb........	42a45	cts.
American full blood fleeces,.....................	38a40	"
" half blood do	30a32	"
" one-fourth blood and common,.....	28a29	"

☞ There is no foreign demand for flour, and but little for Indian corn or meal. Foreign accounts represent the prospect for grain crops as favorable. The potato disease had not appeared in the growing crop, which was promising. In the south of England new potatoes had been brought to market, and were selling at moderate prices. The wool trade in Europe is rather depressed, but considerable purchases were made by the English manufacturers at the late Continental fairs, and a revival of business in this line was anticipated. The wheat crop in this country is generally abundant.

WHEELER'S PATENT HORSE POWER AND THRESHER.

THE above machines having attained a wide introduction among all classes of Farmers and Mechanics, and having without exception, given the fullest satisfaction, we do not hesitate to recommend and warrant them to any and all wishing such machinery—For prices, particular recommendations, &c., see the Albany Cultivator for February, 1847 and 1848, also for May, 1848. Also Catalogue, gratis, at Store, Nos. 10 and 12 Green st , Albany, or by mail.

HORACE L. EMERY.
General agent for the manufacturer, wholesale and retail.

JOHN MAYHER & CO.,

UNITED States Agricultural Warehouse, No. 195 Front one door South of Fulton Street, N. York City.

Where they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New-York, which will be sold at lower prices than they can be purchased at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayer & Co.'s celebrated and unequalled First Premium Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, August 1, 1848.—tf.

EAGLE PLOWS.

NO Plow has been so long before the public with so few alterations, come into so general use, or received so many and so high grade premiums, as the genuine Eagle Plow, made by the inventors, Messrs. Ruggles, Nourse & Mason.

Notwithssanding the great diversity of soils, modes of culture, and the constantly increasing competition, and being subjected to the most thorough and persevering trials ever had in this country, the Eagle Plow still stands at the head of the list for excellence of work, materials, durability, workmanship, ease of draft, and price.

Some of its merits over other kinds in use, are that the metal is of such a mixture of irons as gives them strength equal to malleable iron and admits of the chilling process on all the wearing parts, which causes them to wear sharp, and do three to five times the amount of work, as the ordinary kind of plow casting—while the risk of breaking is not increased by the process.

All sizes of the above plows constantly on hand at wholesale and retail, at manufacturer's prices, at the Albany Agricultural Warehouse, Nos. 10 and 12 Green St, Albany. All plows warranted.

For prices description, &c., see Catalogue, gratis at Store or by mail. H. L. EMERY.

GREATEST IMPROVEMENT OF THE AGE.

Smith's Lever Drill.

Patented November 4, 1846, to H. W. SMITH.

THE advantages of this machine as fully established by use and experiment, are.

1.—A saving of from two to three pecks of seed per acre.

2—An equal distribution of any given quantity of seed, covered at a uniform depth.

3—A saving of labor; a boy and team, with this machine, can complete from 8 to 10 acres per day; and the surface of the soil is left in such a position that it does not encrust, and undergoes a constant course of natural cultivation by the action of every shower, so that the gases and atmosphere readily penetrate,—hence,

4.—The grain is not so liable to be thrown out by frost.

5.—It stands firmer and stronger, and is not so liable to be injured by rust or the fly.

6.—Where these machines have been used, the saving of seed and increase of product, amounted to from 20 to 25 per cent.

The great improvement in this machine, over all others of the kind, is its simplicity, durability and economy, and the facility and certainty with which it can be *set* or *altered* by a regulated *index* and *guage* to drill or plant any given quantity of grain per acre, at any given depth.

These machines are now being made at Syracuse.

County rights to manufacturers sold on reasonable terms.

For further particulars address the undersigned, post paid at Syracuse. C. MASTEN,

Aug. 1, 1848.—3t.

SALE OF STOCK AT BUFFALO.

I WILL sell at the State Cattle Show in September next, at Buffalo, about 30 thorough bred Short horns, consisting of cows, young bulls, heifers, and calves.

Also, 30 thoroughbred Devons of like description.

Also, 30 " Cotswold Sheep, (long-wooled) ewes & rams.
30 " Southdown Sheep, (middle-wooled) of same sexes.

Catalogues and pedigrees of the stock will be on the show grounds where the animals will be exhibited.

The character of my stock is generally known—and I shall offer it all indiscriminately to the public, making no reservations for my own use.

Black Rock, June 13, 1848—2t. LEWIS F. ALLEN.

SCIONS FOR BUDDING,

At low prices,

FOR Sale by J. J. THOMAS, at his nursery in Macedon, including most of the standard varieties of apple, cherry and peach, *all proved by bearing*, at $2 to $5 per 1000 buds, where quantities are taken, and an additional discount on large orders. Several new varieties of fruit furnished in smaller quantities at moderate rates. Bundles packed for sending by express, so as to keep fresh a week. Applicants stating the varieties and quantities wished, will be furnished with distinct prices. All communications to be post-paid, and orders to be accompanied with remittances, or satisfactory references.

Address, J. J. THOMAS, *Macedon, Wayne, Co., N. Y.*

July 1—6t.

SCHOOL OF APPLIED CHEMISTRY.

Attached to the " Department of Philosophy and the Arts," in Yale College.

B. SILLIMAN, Jr., Professor of Chemistry and the kindred Sciences applied to the Arts.

J. P. NORTON, Professor of Agricultural Chemistry.

THE Instructors in this department have opened a commodious laboratory on the College grounds, where they are now prepared to receive pupils in special and general chemistry. The system pursued with those who design to become chemists or to study the science extensively, is thorough and complete. Such students always commence with an extended course of qualitative examination of unknown substances—and in due time pass through a series of varied quantitative determinations. To those who wish to follow special investigations connected either with the arts, agriculture or pure science, every facility will be afforded, both in organic and inorganic analysis.

Prof. B. SILLIMAN, Jr., will instruct particularly in general elementary and analytical Chemistry, Mineralogy and Metallurgy, with special reference to their application to the useful arts. He will also give a course of lectures on Mineralogy and Mettallurgy, continued through the summer term. During the fall and earlier part of the winter, he will also carry a class through a course of elementary Chemistry, in elucidation of the regular course on this subject n the Academical department.

The instruction in the Professorship of Agricultural Chemistry is intended to unite, as much as possible, practical views with theory; to give the untaught farmer an opportunity to become acquainted with so much of science as shall enable him to reason upon his daily pursuits, and to understand the great principles upon which good cultivation must depend, presented in so plain a form as to be within the comprehension of all. Few chemical terms will be employed in the lectures, and those only of the simple explanations; they will thus be understood by those who have never devoted any attention to the subject. A regular course of lectures will be delivered in the winter of each year, commencing in January and continuing about two months, there being four lectures in each week. The subjects of the course will be—the composition and nature of the soil, the plant, and the animal—theories of rotation of crops, and of feeding—modes of draining—the different kinds of manures, their value and how beneficial—the improvement of waste land, &c. &c. Text-books will be indicated for study during leisure hours.

In connection with the lectures, will be a short course of elementary Chemistry, for such as wish to study somewhat more of chemistry than is given in the course, and to qualify themselves for making ordinary testings and qualitative examinations of soils, manures, &c.; this course will occupy two hours of five days in each week during two months.

The fee for the Lectures on Agricultural Chemistry will be $10. That for the Elementary Chemical Course, including apparatus and reagents, will be $25.

Students in Analytical Chemistry are allowed to work in the laboratory during the whole day; glass will be furnished, (with charges for breakage,) also the ordinary reagents and balances for the use of those who are so far advanced as to require them. There will be frequent recitations, and the students will receive the constant attention of one or both of the Professors. The fee for this class will be $20 per month.

The vacations will correspond with those in the Academical departments, viz:—six weeks from the third Wednesday of August; two weeks from the first Wednesday in January; and four weeks from the third Wednesday in April of each year. Sessions begin with the close of each vacation, and are in length respectively, 14—14 and 12 weeks.

Students in this school will enjoy all the advantages to be derived from the extended means of the Institution in Libraries, Instruments and Collections. The mineralogical and Geological collection is widely known as one of the best in the country, and there are smaller collections in the possession of the Professors. Those who desire it can have access to the Lectures on Chemistry, Mineralogy and Geology, by Prof. B. SILLIMAN, Senior, and to the Lectures on Natural Philosophy, by Prof. D. OLMSTED.

Instruction is also accessible in higher Mathematics, in Engineering and the use of Instruments in Philology, History, Oriental Languages and Belles Lettres.

The department of Philosophy and the Arts in Yale College, of which the School of Applied Chemistry is a part, has been organized with a view to meet the wants of those who desire to follow the studies embraced under it further than they are pursued in a collegiate course. Those who desire further information on this subject are referred to the annual catalogue of the Institution for 1847, '48.

A college education is not however required of those who become students under this department.

The Professors are always accessible to those who wish to consult them on matters relating to their several departments: and will undertake such analyses as may be entrusted to them. Letters of inquiry will be promptly attended to.

Analytical Laboratory, Yale College, New Haven, Aug. 1848.—6t.

ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess, or suffering injury from is use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

THE FARMER'S SONG.

I envy not the mighty king
Upon the splendid throne—
Nor crave his glittering diadem,
Nor wish his power mine own:
For though his wealth and power be great,
And round him thousands bow
In reverence—in my low estate
More solid peace I know.

I envy not the miser—he
May tell his treasure o'er,
May heaps on heaps around him see,
And toil and sigh for more;
I'd scorn his narrow sordid soul,
Rapacious and unjust;
Nor bow beneath the base control
Of empty gilded dust.

Let warriors mount fame's giddy height,
Gain glory's gallant mead—
Be calm, collected in the fight,
Where thousands round him bleed;
I envy not their victor wreath,
Their courage nor their fame;
Their laurels are a fleeting breath,
Their glory but a name.

Selected.

WM. R. PRINCE & CO.,

Sole Proprietors of the Linnæan Gardens and Nurseries, Flushing,

WILL transmit their NEW STRAWBERRY CATALOGUE, comprising every estimable variety, with descriptions, culture and prices, just published, to every post-paid applicant.

The following form a part only. The prices per 1.000 are greatly reduced. H denotes the Hermaphrodite, and P the Pistillate varieties. The varieties thus * designated are not in possession of any other nursery in this town or elsewhere. Strangers will enclose cash with their orders.

	Price pr doz.	pr 100
Scarlet & Pine Strawberries		
Abyssinian Prince, P	$2 00	$8 00
Aberdeen Beehive, H	2 00	8 00
*American Scarlet P	50	2 00
* " Prolific, H	50	2 00
*Bishop's Globe, P	50	2 00
* Seedling, true. P	50	2 00
Bishop's Orange, true		
Black Prince, P	50	2 00
Boston Pine, H	50	2 00
*Brilliant, H	2 00	8 00
Burr's Seedling, H	37	2 00
" Columbus, P	60	4 00
" Late Prolific, P	1 25	8 00
" Mammoth, H	1 00	6 00
" New Pine, P	1 25	9 00
" Profusion, P	1 00	5 00
" Rival Hudson, P	60	4 00
" Sc'rlt Melting, P	1 25	6 00
" Sciota, P	1 25	8 00
*Charlotte, P	3 00	10 00
*Chili, H	3 00	10 00
*Cluster Hudson, P.	1 00	5 00
*Cornucopia, P	2 00	10 00
Crimson Cone, P	75	3 00
* " Pine, H & P	1 50	6 00
Cushing, H	50	2 00
Eberlein, H	1 50	6 00
*Eustatia, P	2 00	10 00
*Globose Swainstone		10 00
H	2 00	10 00
Hovey's Seedling, P	37	1 50
Hudson, H & P	25	1 50
*Illinois, P	50	2 00
Jenney's Seedling, P	50	2 00
*Ladies' Finger, H	2 00	10 00
Large E'rly Sc'rlt, H	25	1 00
*Le Baron, H	2 00	8 00
Lizzie Randolph, P	2 00	10 00
*Magnate, P	3 00	15 00
*Magnifique, P	3 00	15 00

	Price pr doz	pr 100
Methven or Victoria, P	25	1 50
*Monstrous Swainstone, H	2 00	10 00
*Primate, H	3 00	10 00
*Primordian, P	2 00	10 00
*Profuse Scarlet, P	3 00	5 00
*Prolific Hudson, P	1 00	8 00
* " Swainstone, H	2 00	8 00
*Refulgent, P	2 00	8 00
*Round White Carolina, H	2 00	8 00
*Serena, H	2 50	10 00
*Theresa, H	2 00	8 00
*Tivoli Scarlet	2 50	10 00
*Unique Scarlet, H	1 00	5 00
Prairie Strawberries		
*Camak's Scarlet, H.	50	2 00
Iowa, H	50	2 00
Prairie Cluster, P	50	2 00
Pistillate Keen, of Ohio.		
Taylor's Seedling, P.	50	2 00
Unique Prairie, P	50	2 00
Necked Pine, of Ohio		
Willey, P	50	2 00
Hautbois Strawberries.		
*Green, H	50	2 50
*Large flat H'tbois. H	50	2 50
Prolific Hautbois, H.	37	1 50
Alpine & Wood Strawbrerries		
*Besancon Alpine, H	75	3 00
Redwood, (English) H	25	1 00
Whitewood, " H	25	1 00
Red Alpine, with runners, H	25	1 00
White Alpine, do H	50	2 00
Red Bush Alpine, no runners, H	50	2 00
White Bush, do do H	50	2 00
Montevideo Pine.		
*13 Splendid varieties, each $5 per dozen		

Fruit Tree Scions for budding.

WM. R. PRINCE & CO., Flushing, will supply these at the same prices as advertised in the Cultivator and Horticulturist of January last. Aug. 1, 1848.

FARM FOR SALE AT A BARGAIN,

CONTAINING Two hundred and thirteen acres, six miles west of Batavia, Genesee county; one hundred and sixty acres under good improvement; balance about equally divided in good rail and hard timber, with good sugar orchard. Soil good for grain or grass. Three large barns with stabling attached for fifty horses.—Story and half house, kitchen and wood shed attached. Buildings all nearly new and in good condition. Ten per cent down, the balance can remain on a long credit. For any farther information, address, (post paid,) H. HUNTER, Rochester City, N. Y.

July 1—ju. & sept.

HORSE POWERS.

FARMERS in want of good Horse Powers and Threshing machines, will find them at the Albany Agricultural Warehouse and Seed Store. For description and recommendations, See Feb. No. of Albany Cultivator, for 1847 & 1848—also May No., 1848.

Descriptive Catalogue gratis.

SALE OF SHORT HORNED CATTLE.

I WILL Sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers, and young Bulls. A catalogue with their pedigrees will be ready at the time of the fair.

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and six South Down Rams.

References—A. B. ALLEN, N. York; SANFORD HOWARD and B. P. JOHNSON, Albany; FRANCIS ROTCH, Butternuts; and L. F. ALLEN, Black Rock. JOHN M. SHERWOOD.

Auburn, May 16, 1848 —4t

AMERICAN AGRICULTURAL WAREHOUSE AND SEED STORE.

S. C. HILLS & Co., No. 43, Fulton Street, (removed from 189 Water Street) offer for sale, Prouty's Ploughs and Horse Rakes, Mayher's and Moore's Ploughs, Corn Mills, Corn Shellers—Catchpole's very superior Stalk and Straw Cutters, Hovey's do. do., Grain Cradles, Churns, &c. &c. Also, Garden and Flower Seeds, raised by the Shakers, and warranted good; Fruit and Ornamental Trees and Shrubbery, supplied on short notice.

June 1, 1848.—3t

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen. H. L. EMERY.

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847, and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring tothe ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost. CLARK LEWIS, 2d.

German, Chenango Co., N. Y., April 15, 1848.

THE OLD MORGAN GIFFORD.

THE highest blooded Morgan Stallion, now remaining, will stand this season at the Stable of F. A. WIER, in Walpole, N. H.

Terms, $25, five dollars of which to be paid at the time of service, and the remaining $20 if the mare proves in foal. Pasturage furnished as usual.

FRED. A. WIER, } Committee
ELISHA DEWOLF, Jr. } of the
AMBROSE ARNOLD, } Proprietors.

June 1, 1848.—3t*

KINDERHOOK WOOL DEPOT.

THIS enterprise having met the expectations of its projectors, will be continued upon the following principles:

The Fleeces will be thrown into *sorts* according to *style* and *quality*.

A discrimination will be made between wool in good or bad condition.

All who desire it, can have their clips kept separate.

Sales will be made invariably for cash.

The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25c. on $100 for a term of three months.

Liberal advances in cash made on the usual terms.

Arrangements have been made with Manufacturers using different grades of wool, to purchase the various sorts at their market value soon after being received at the Depot. If the opening market price is not satisfactory, the wool will be offered for sale at such time as the owner may direct.

Reference can be had to

Dr. J. P. BEEKMAN, Kinderhook; D. S. CURTIS, Canaan;
C. W. HULL, New Lebanon; J. B. NOTT, Esq. Guilderland;
C. H. RICHMOND, Esq., Aurora; Col. J. MURDOCK, Wheatland, [N. Y.;
B. P. JOHNSON, Esq., Sec.,
N. Y. St. Ag. Soc. Albany.

H. BLANCHARD, Agent.

Kinderhook, N. Y., June 1, 1848.—3m

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

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F. A. GIFFORD.

Hudson, May 9, 1848—5t*

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April 1—4t.

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OR

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From the Farmer's Visitor, by Gov. Hill, N. H.

As the Editor of that excellent agricultural paper, the Boston Cultivator, and other kindred works, Mr. Cole has shown himself well qualified for the compilation of this work. We have known him for years, and he has proved himself to be one of the most persevering and able of our agricultural editors. We understand his new book has already had a free and extended sale. Many times its price to almost any farmer, may be saved in its purchase.

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THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England,) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at $300 each. The young animals above enumerated will be sold at prices ranging from $100 to $150. GEO. VAIL.

Troy, May 1st. 1848—4t.

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An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction.

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DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

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April 1—4t.

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May 1, 1848—6t. Cabotville, Mass.

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For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos 10 &12 Green-street, Albany, New-York, or by mail.

H. L. EMERY.

June 1, 1848.

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THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

Edited by A J. DOWNING, Esq.

PUBLISHED at the office of the Cultivator, Albany, N. Y., by Luther Tucker, at $3 per year.—Two copies for $5. Vols. 1 and 2, completed with the June No. 1848, now ready for sale, either bound, or in paper covers to send by mail.

Contents of No. 1, Vol. III—for July, 1848.

Hints to Rural Improvers—Memoir of the President of the Massachusetts Horticultural Society—Further Notes on the Strawberry Question—Remarks on Hybridizing Plants—Successful Mode of Growing Gooseberries—Insects on the Native Grapes—The Red Diaper Plum—Cure for Plum Tree Knots—Hints to Cultivators of the Pear—Diseases of the Peach Tree in Western New-York—A Peach Orchard Resurrection—Ornamental Vases and Chimney Tops—The Beautiful Gardens of Italy—Design for a Small Cottage—Northern Spy Apple—Transactions of the Mass. Horticultural Society—Cleveland Cherries—The Pomological Convention—Raspberry Culture—Pomological Convention at New-York—The Character of the Strawberry—Cherry Trees at the South—Horticulture at Nashville, Tenn —A word for Botanists on the "Great Strawberry Question"—Thorburn's Exotic Nursery—Perpetual Roses—Answers to Inquiries—Proceedings of the Massachusetts, Albany and Rensselaer, and Pennsylvania Horticultural Societies.

ILLUSTRATIONS.—*Plates.*—Portrait of Col. Wilder and view of a Cottage, together with thirteen wood engravings.

The Horticulturist for June is before us. This number completes the year, during which we hesitate not to say, every subscriber has received quadruple of valuable information over the cost of the work. The June No. has many valuable articles, which should be read by all Horticulturists, and we trust for their own interests, all will subscribe for the work, commencing with the July number, being the first for the ensuing year.—*Cleve. Herald.*

The June number, which completes the second volume, reached us a day or two since. We are pleased to learn from the publisher that it has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. It deserves this success. For editorial taste and ability, beauty of typography and embellishments, it is not surpassed by any periodical with which we are acquainted.—*Alabama Planter.*

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August 1, 1848.—2t.

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TOBIAS L. HOGEBOOM.

Ghent, July 13, 1848—2t.

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July 1, 1848.—2t. A. B. ALLEN & Co.

THE CULTIVATOR
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☞ Advertisements inserted in the Cultivator, at the rate of $1 per 100 words, for each insertion.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, SEPTEMBER, 1848. No. 9.

USE OF BONES AS MANURE.

It is now 40 or 50 years since bones began to be used extensively as a manure in Europe, and within the last 20 years immense quantities of them have been applied to the lands of England and Scotland, by which means tracts have been brought into profitable cultivation which were before entirely unproductive. Bones have, indeed, been exported in no inconsiderable quantities from our own country to Great Britain, and there made to yield the means of support to a manufacturing population, the products of whose labors have been returned and purchased by us.

If bones can be made thus useful to the British farmer, it is reasonable to believe that their proper application would be attended with useful results here. In the older settled and most populous parts of this country, there is a scarcity of manures, and a constant demand for such as can be advantageously used. Hence we think a knowledge of the proper preparation of bones and the best mode of applying them would be of great utility. We have on a previous occasion, alluded to an article on this subject, by Prof. F. W. JOHNSTON, published in the Transactions of the New-York State Agricultural Society, for 1847, and we think our readers will be benefitted by a careful perusal of the following extracts. In regard to the preparation of manures with a view of meeting the special wants of various soils and crops, Prof. J. thinks chemistry will by-and-by be able to direct; though he thinks it probable that "quackery will for awhile beset the steps of the farmer, and defective knowledge, especially of practical agriculture and of physiology, will lead the chemist astray." Nevertheless, the result, he believes, "is sure of being accomplished at last." In the mean time, he advises that we have "perfect faith in the science herself, while we, at the same time, exercise a reasonable distrust towards those scientific men who profess to know all, and to be able to do and to explain everything."

The essay of Prof. J. is quite elaborate, and goes fully into detail, in regard to the composition and uses of bones as manure. It is divided into ten sections, of which we give the following, which comprises the most essential parts.

COMPOSITION OF BONES.—Bones differ slightly in composition in different animals; they vary also with the age of the animal and the part of the body from which they are taken. The following composition of the bones of the cow will represent very nearly that of the bones which are usually applied to the land.

Organic Animal Matter (gelatine,)...	33¼
Phosphate of Lime,.................	55½
Phosphate of Magnesia,.............	3
Carbonate of Lime,.................	3¾
Soda and Common Salt,...............	3½
Chloride of Calcium,................	1
	100

When bones are burned in the open fire, the animal matter they contain—the gelatine—disappears, and the white *bone earth* alone remains. These two portions of the bone, the combustible or organic, and the incombustible or inorganic part, are equally essential to the fertilizing action which the bones produce. As some inexperienced writers have disputed this in regard to the organic part, it will be proper briefly to advert to its composition and mode of action.

COMPOSITION AND MODE OF ACTION OF THE ORGANIC PART OF BONES.—The gelatine of bones consist of,

Carbon, ...	50.37
Hydrogen,.....................	6.33
Nitrogen, ...	17.95
Oxygen, ...	25.35
	100.

It is identical in composition with horn and with isinglass, and is very nearly the same as hair, wool, and skin. It is of importance to recollect that it contains about 18 per cent, or one-sixth of its weight, of nitrogen.

That this organic part is *likely* to act beneficially as a manure, is rendered probable by the fact, that horn shavings are highly valued as an application to the land, and that the parings of hides and woolen rags bring a high price in the market as manures for certain crops.

But that it *does* act beneficially is proved by the success which attends its use, when separated from the earthy part of the bones. In Manchester, bones are boiled for the extraction of a size (glue,) which is used in the stiffening of calicoes. When the stiffening liquor is so exhausted as to be unfit for farther use, it has been applied as a liquid manure to grass-lands, with the greatest success. There can be no reasonable question then that upon the organic part of bones, their beneficial action as a manure in some degree depends. It is only surprising that chemists of name should have been found to deny it, and that practical men should have so far distrusted their own experience as to have believed and acted upon such an opinion.

But how does this organic matter act? It no doubt feeds the plant, but it may do this in one or other of two ways. It may either be completely decomposed in the soil, and enter the roots of plants,—as Liebig supposes all organic nourishment to enter—in the form of carbonic acid and ammonia; or it may be rendered soluble in the soil, and may thus be taken up by the roots, without undergoing any ultimate and thorough decomposi-

Now, supposing it to be resolved into carbonic acid and ammonia, the quantity of gelatine contained in 100 lbs. of dry bones is sufficient to produce upwards of 6¼ lbs. of ammonia, as much as is present in 20 lbs. of sal ammoniac, or in 30 lbs. of crystalized sulphate of ammonia. Supposing the animal matter of the bones to be thus decomposed in the soil before it can be useful to the plant, few, I think, will question that the quantity of ammonia it is likely to produce would materially aid the growth of the crops to which bones are applied.

But I do not think this final decomposition necessary. The large quantity of nitrogen which the gelatine contains, may, I believe, be taken up by the plants without being previously brought into the state of ammonia. The gelatine being rendered soluble in the soil, may enter the roots and may at once minister to the growth of the plant, just as the gluten of the seed, being rendered soluble when the grain germinates, ascends with the sap, and feeds the young plant. It would be out of place here to discuss this point, or to give the reasons which induce me to entertain this opinion. It is sufficient for the practical man to know, that which ever of these views a man may hold, he must still grant that the gelatine of the bone is valuable to the farmer. Whether its nitrogen enter into the root in the form of ammonia or in some compound state, it must be useful to the plant, and, therefore, he who advises the farmer to burn his bones, or would persuade him that the earthy part alone, or *anything equivalent to this earthy part* would alone be as useful to his land as the entire bone, advises him to his hurt, and would persuade him to that which would eventually be a source of loss.

MODE OF ACTION OF THE INORGANIC PART OF BONES.—The composition of the incombustible part of bones, the bone earth, has been given above. It consists chiefly of phosphate of lime, with about three per cent each of phosphate of magnesia, carbonate of lime and salts of soda.

All these substances, of which its bones consist, the Ox must have derived from its vegetable food. They must therefore be present in all fertile soils. And if a soil is poor in these substances, or is wholly void of them, that soil must be improved by the addition of these things. In other words, they must be invaluable as manures to such a soil; and hence the worth of bones to the practical farmer.

Sprengel long ago reasoned thus; and he asserted that the indications of theory were proved by experience—that burned bones actually fertilized the land.

Liebig followed him; but more boldly pronounced that the whole value of bones as a manure, depended upon, and was derived from the earthy phosphates they contained.

In the Appendix to my published *Lectures on Agricultural Chemistry and Geology*, and in my *Suggestions for Experiments in Practical Agriculture*, published separately, I suggested with the view of settling this question to the satisfaction of all, that comparative experiments should be made with burned and unburned bones upon the same soils and crops, and with quantities of each, which should contain equal weights of the earthy ingredients.

Numerous experiments were in consequence, made in various parts of the Island, few of them exactly fulfilling *all* the conditions which were necessary to secure accurate comparative results. Some of them are recorded in the Transactions of the Highland and Agricultural Society, others have been published in the different agricultural periodicals of the day. I do not quote any of them, for they are not all concordant, but the general results were these:

a. Bones under favorable conditions, seldom fail when applied alone, in raising an average crop of turneps.

b. Burnt bones laid on alone, and in a quantity equivalent to that of ordinary manuring with bones, don't always succeed in raising an average crop of turneps.

c. In some rare instances again, and upon some soils, burnt bones actually raised a larger crop of turneps than an equivalent weight of unburned bones.

Burned bones therefore, as theory indicates, are useful to the land. But the employment of unburned bones is the safer and surer. This greater security must arise from the organic matter they contain, and therefore this organic matter cannot be without its use. Therefore, also, an artificial mixture, which contains nothing equivalent to this organic matter, can never be made to perform all the functions of bones. If the soil already contains a sufficiency of organic matter—or if this be added in the form of farm yard or other similar manure—then burned bones, or artificial mixtures of a similar kind, will be sufficient to produce the usual effects of bones. But if organic matter be deficient, the entire bones will always be the farmer's surest reliance.

The adoption of this second view, is at present opposed by the notion which many have been led to adopt—that if plants can only obtain saline matter from the soil, they will draw organic food enough from the air. The ammonia of the atmosphere it is said, will give nitrogen enough to the plant—and thus, in the case of bones, their organic matter is useless, since the air will readily yield to the plant, what we suppose this organic matter to impart to the roots. But I believe the minds of our thinking men will soon be disabused upon this point; and that in a few years, this opinion will have found its long resting-place, among the other singular fancies, which, year by year, afford ephemeral occupation to the novelty-loving among our gentlemen farmers.

METHODS ADOPTED FOR INCREASING THE SENSIBLE EFFECT OF BONES.—Without referring much to the effect which bones might theoretically be expected to produce, it has been observed by practical men that they may be made to act more quickly and more beneficially by the adoption of certain previous precautions, such as,

1. *Reducing them to fine powder.* I have already alluded to the fact ascertained by experience that the finer the powder, the more immediate and the more sensible the effect of bones. But practical men were afraid to venture too far in diminishing the weight of manure, added to the soil. Bulk was considered to enter as an element into the fertilizing capabilties of any substance. Many leases even prohibit the addition of less than 16 or 20 bushels of bones, when used alone in raising turneps. But under the guidance of science, both tenants and proprietors will, by and by, learn to estimate more correctly what the crops really carry off, and what the soil therefore requires. Thus a strictly scientific economy will be established, and no more of any thing will be added to his fields than the farmer knows and *understands* to be necessary to maintain them in a state of permanent fertility.

2. *Heating the bones.* In some districts their action in hastening forward the young turnep, and bringing it quickly into rough leaf, where it is safe from the attacks of the fly, is increased by laying the bones in a heap, and covering them over with earth, for a week or ten days before they are drilled into the land. Left in this state, they heat, soften, and begin to change or decompose; and thus, when laid in drills near the seed, they are ready to furnish nourishment to the young plant as soon as the roots first thrust themselves downwards from the sprouting seed.

3. *Fermenting them with dung*, or the same decomposition is effected and carried further by mixing the bones with farm yard manure, and leaving the mixture

awhile to ferment. It was the result of trials made by thirteen different persons, and which are recorded in the Doncaster Report, that a given weight of bones, when mixed and fermented with farm yard manure, invariably produced a more beneficial effect, than the same weight of dry-bone dust, applied to the same crop and upon the same soil.

The advantage which results from these several methods, arises from the effects which they produce, either in diminishing the mechanical coherence of the particles of the bone, or in altering by incipient decomposition, the chemical state of the organic matter it contains. None of them, however, sufficiently effect these objects, though I do not doubt that fine bone-dust; fermented for two or three months with farm-yard manure, and occasionally turned over, would be brought into a condition more nearly approaching to guano in its fertilizing virtue, than any other form of bones which has hitherto been *generally* employed.

Decomposing and Dissolving Bones by means of Sulphuric Acid.—But another mode of preparing bones has recently been introduced, and for two or three years has been extensively employed as a part of the ordinary husbandry, especially by some of the Scottish farmers. This mode consists in decomposing, and more or less dissolving bones in sulphuric acid, (oil of vitriol.) This may be done in various ways, and the prepared bones may either be applied in a liquid state with a watering cart, or may be dried and sowed with a drilling machine, or broadcast, like ordinary bone or rape dust.

a. The bones in the form of bone dust, or where bone mills are not at hand, simply broken in pieces with a hammer, may be put into a cast iron, stone, earthen ware, or strong wooden vessel, mixed with half their weight of boiling water, and then with half their weight of the strong oil of vitriol of the shops, stirring constantly while the latter is slowly poured in. A powerful boiling up takes place, which gradually subsides.

By occasional stirring, the whole assumes the appearance of a thick paste, the pieces of bone gradually disappear, and after a week or ten days the whole may be taken out and mixed with a little charcoal powder, charred peat, saw dust or fine dry earth, to make it dry enough to pass through the drill, and may thus be immediately applied to the land. It would, however, be better to prepare the bones a month at least, before using them and lay them up in a heap for a while, with a view to their more perfect decomposition. When the pieces of bone are large, this is especially desirable, as otherwise they will not be fully decomposed without a larger addition of both water and acid.

b. Or the acid and bones as above, may, after a couple of days, be mixed with a quantity of light, friable soil, and laid up into a heap for seven or eight weeks, with occasional turning. The bones thus heat, decompose and dry up, so as to be ready for putting into the drills without further preparation. This method, however, requires more acid, and it is not unusual in employing it, to take equal weights of acid and bones. It may be, some practical men, indeed, employ invariably equal weights of acid and bones, while others are satisfied by mixing the bones with one-third or even one-fourth of their weight of acid. I would myself employ not less than a half.

c. Or equal weights of bones in the form of dust, of boiling water and of acid* may be mixed together and occasionally stirred for a week or ten days, and when the particles of bone have nearly disappeared, from 50 to 100 times more water may be added to the mixture, and the liquid thus diluted may be applied by a water cart. If it is to be used upon grass land in the spring, or to young corn, it will be safer to dilute it with 200 waters, but fifty waters, (by weight,) will be enough if it is applied to the turnep drills. A common watering cart used for other liquid manures, will serve for the former purpose—for applying it to the drills, a very ingenious addition of tubes to this cart has been contrived by Mr. Wagstaff, and employed by him under the direction of the Duke of Richmond, at Gordon castle.

This method of applying bones in the liquid form, is, no doubt, the most perfect, but it is also the most troublesome and expensive, and may not, therefore, come so soon into general use, though it may ultimately prove the most profitable.

Instead of sulphuric acid, the muriatic acid or spirits of salt, has been, indeed was first, tried for the dissolution of bones, but the former appears at present, for several reasons, to be preferred.

Comparative Effects of Dissolved Bones.—The first experiments with dissolved bones were made in 1841 by Mr. Fleming of Barochan. The result is published in the appendix to my published *Lectures on agricultural Chemistry and Geology*, *p*. 28. He dissolved bones by means of muriatic acid and applied them to moss oats. In his report to me, published as above, he says: "I examined them a few days before they were cut, and was much satisfied with their appearance. The straw appeared as stiff and shining, and the ear was as well filled, as if it had been grown upon stiff loam, and *I consider the same dressing*, (he had applied it as a top dressing sown broad cast upon the young corn) *applied to grain crops upon moss will insure a good crop and well filled oats*." In 1842, he made many additional experiments, which he was kind enough to communicate to me for publication in my lectures. Those upon oats confirmed the results of 1841, but I quote only the following comparative results from the appendix, p. 8. The turnpes and potatoes were raised with bone alone, without other manure.

Produce from an Imperial Acre.

	Dry Bone Dust.				Bones in Muriatic Acid.			
	16 *cwt.*		18 *cwt.*		4 *cwt.*		10 *cwt.*	
	Tons.	Cwts.	Tons.	Cwts.	Tons	Cwts.	Tons.	Cwts.
Swede Turnep,	14	17	—	—	—	—	18	11
Red Don Potatoes,	—	—	9	16	12	15	—	—

Both of these results, as I have observed, were greatly in favor of dissolved bones. In the case of the potatoes he found the produce a little augmented by the addition of wood ashes.

Since that time, numerous experiments with dissolved bones have been made in Scotland. In Fifeshire, crops of turneps have been raised at a cost of not more than 8s. or 10s. per acre. In Ayrshire, Mr. Tennant of Shields, as early as 1842, used as much as 200 bushels of bones on his own farm, prepared as above described, (*b*.) and he found 2¼ bushels to be equal in effect to 2 cwt. Peruvian guano. In 1843, a premium offered by the Morayshire Farmer's Club caused numerous experiments to be made in that county. I have given an abstract of the very important results of these experiments in the 4th edition of my *Elements of Agricultural Chemistry*, p. 155, and the report has since been published in full in the Journal of the Royal Agricultural Society, p. 447. In 1844, the premiums of the Highland and Agricultural Society led to many other experiments; the results of which, made in different ways and upon different soils, are published in their Transactions for 1844. These general conclusions are,

1. That four, and in some cases, even two bushels of dissolved bones will produce as good a crop of turneps as sixteen or twenty bushels applied in the usual form. The crops also start more quickly and grow more rapidly.

2. That the more complete the state of solution or subdivision of the bones, the greater the effect. Howev-

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* A gallon of water weighs 10 lbs., a gallon of acid 17 or 18 lbs.

when applied in the liquid state, the benefit is most apparent.

OUGHT ANY OTHER SUBSTANCES TO BE MIXED WITH DISSOLVED BONES?—Bones are known to exercise a comparatively feeble action upon stiff and undrained clays, and it may, therefore, be reasonably asked by some if the action of dissolved bones will be more certain upon such soils than the bones in their natural state? We may, I think, answer this in the affirmative. since the principal cause of the less conspicuous effect of bones upon such soils is to be found in their tenacity and coldness, by which the particles of bone are shut out from the air, and their decomposition is retarded.

But inasmuch as bones do not contain the whole of the substances which plants require, and as some of those which are present in bones, the salts of soda, for example, are in small quantity only, it may be reasonably asked again, if the dissolved bones would not be improved, and their efficacy increased, and rendered more *sure*, were an addition of certain substances to be made to them. Of this I think there can be little doubt, though the necessity and nature of such additions will depend much upon the nature of the soil to which they are to be applied. A small per centage of pearl ash or wood ashes, of nitrate of soda, or common salt, and a sulphate of magnesia—5 lbs. each of the potash and soda salts, and 10 lbs. of the magnesia salt to each 100 lbs. of bones—would render the mixture more suited to every soil and crop. At the same time, if the soil, like those formed from the felspar rocks, abound in potash, or like those which border the sea, be rich in soda, or like those which owe their origin to the slates, or to the magnesian limestones, contain already too much magnesia, any addition to these several substances would obviously be thrown away. The principle of adding such things being recognised as sound, the knowledge and discretion of the farmer must be exercised in determining how far such additions are likely to be profitable, or he may make a small preliminary experiment by way of trial.

In conclusion, I may remark that the more extended use of this mode of preparing manures—creating, as it must, an increased demand for sulphuric acid, and consequently for the raw materials from which this acid is manufactured—will exhibit another illustration of that intimate connection, which must always, in a healthy state of things, exist between the agricultural and the manufacturing and the mining interests, and of the certainty with which the advancement of these interests must lead to the greater extension and prosperity of every other department of the national industry.

HABITS OF INSECTS.

The remarks of a correspondent of the *Cultivator*, under the head of "Spare the Spiders," suggest the importance of a knowledge of the habits of insects. The innumerable number of these, and the immense consequences depending upon them, are seldom properly considered. Many tribes attack the crops of the farmer, which fail more frequently from this cause than any other, except, perhaps, the effects of unfavorable weather. Famine and pestilence have at several periods ensued from their devastations in various parts of the Eastern Continent, and even in our own country, they have often occasioned great losses and no small amount of human suffering. The "staff of life" has been nearly cut off in many instances, by the attacks of that tiny depredator, called the Hessian fly, and it's equally insignificant congener, the wheat midge. Various crops have been destroyed by the wire-worm, the cut-worm, and the grasshopper; our fruits have been blasted by the caterpillar, the canker-worm, the curculio, and the aphis; and even the trees themselves destroyed by the insidious workings of borers and worms. Other species, again, prey on our domestic animals, and some directly attack, annoy, and injure the human race.

The more we know of these formidable enemies the better we can protect ourselves against their ravages. And in this view of the subject, perhaps there is no one fact of greater importance than this: nearly every species of insect that is injurious to man, is preyed upon and destroyed by some parasitic or predacious enemy. However revolting, at the first thought, may appear this system of perpetual warfare among the tribes, it is evidently a wise and benevolent principle, calculated to preserve the proper balance in this department of organic life, and affording proof that

"Nature's differences are Nature's peace."

In regard to one of the most destructive insects to the farmer, the Hessian fly, (to which allusion has been made,) its natural enemies are an important check to its increase. "Other insects," says Dr. Fitch, "have been created apparently for the very purpose of preying upon this, and thus preventing it from becoming inordinately multiplied."

There are several species of these *ichneumons*, as they have been named, but one called the *Ceraphron destructor*, is the most common. It is a small bee-shaped insect, not much larger than the Hessian fly, and in the spring may be sometimes seen in great numbers in wheat fields; and the circumstance that it is often mistaken by farmers for the "fly" itself, strikingly exemplifies the necessity of understanding the economy of insects.

This ichneumon attacks the "fly" while in the "flax-seed" state, the latter lying dormant encased in a covering, which resembles in form and color, a flax-seed. It is between the stalk of wheat and the surrounding sheath. Instinct enables the ichneumon to know where its prey is lodged; it punctures the sheath, and deposites its egg in the body of the larva; the egg hatches and becomes a worm, which preys upon and destroys the larva of the "fly." It is thought by some naturalists, that at least nine-tenths of the larva of the Hessian fly are destroyed in this way.

Another very minute parasite of the Hessian fly, a species of *Platygaster*, according to Prof. Herrick, deposites its own eggs in those of the "fly." The latter hatch, and the worms pass into the flax-seed state with the young parasites in them, but they are destroyed before the next transformation is effected, and the parasites leave the shell.

Your correspondent before alluded to, has well illustrated the usefulness of spiders in destroying the troublesome house-fly, and in other respects. There are, however, several species of field-spiders which devour great numbers of crickets, grasshoppers, various kinds of moths, butterflies and beetles. If, towards the latter part of summer, we look at the surface of a meadow or stubble-field, early in the morning, while the dew is on and the sun is shining brightly, it will appear to be almost covered with spiders' webs. On examination, nearly every web will be found to have one or more of the above named insects in it, lately caught; and this ratio of destruction is carried on daily, through several weeks of the season.

The artful sagacity of the spider is in no case more displayed than when a grasshopper falls into his net. The moment the spider discovers his game, he decides on his course, which must be governed by the relative strength of the parties. If the grasshopper is very large, compared with the spider, the latter, on the principle that "prudence is the better part of valor," instantly cuts the threads of his net as closely as possible to the trespasser, and lets him escape with as little damage as possible to the premises. But if the grasshopper is not too large, the spider soon stops his *kicking* by the numerous coils which he throws around him with astonishing rapidity, taking care to bind strongly, the long legs of his prisoner, lest by their use he should spring from the web, or tear it asunder in his struggles. The largest spiders make the strongest webs, and are generally able to manage any insects that fall into them.

But the spider finds a powerful and uncompromising enemy in several species of the mason-wasp. The latter insect is well known from forming habitations for its young of mud or mortar, which is attached to the underside of the roofs of out-buildings, and other sheltered places. The cells in which the young are hatched and reared, are from an inch and a-half to two inches in length; arranged parallel to each other, each distinct and separate internally, but attached together by their outward surface. There are sometimes from four to six of them in a row. When the earthen house is completed, except the closing of the upper end of the long cells, which is done by a single lump of mortar to each, the female wasp deposites an egg at the bottom of each cell, and then proceeds to fill the cells with spiders, which are plastered in, their bodies constituting the food of the young wasp during its larva state, or till it passes through its transitions, and comes out a perfect wasp.

No particular selection is made as to the species of spiders—any being taken that can be crowded into the cells. They are put in *alive* too, and the labor of incarceration is by no means inconsiderable. I have repeatedly witnessed the efforts of both insects on the occasion. Sometimes the spider was so large, that a little exertion of its legs would render it difficult for the wasp to thrust it down the cell; but the work was always accomplished, though the amputation of the spider's legs sometimes became necessary.

Other species of the mason-wasp fill their cells with worms, instead of spiders. Doctor Harris has lately described one, which he calls the potter-wasp, that fills its cells with canker-worms, which it thrusts in alive, "endwise,"—five "full-grown" ones being put into each cell. Dr. H. remarks that if the worms were killed before they were imprisoned, they would become putrid before the young wasps were hatched; and the same may be said in regard to the spiders.

All the mason-wasps are exceedingly bold and rapacious, and seize their prey with surprising celerity—pouncing upon it with almost the quickness of lightning, and disabling it by a single blow, or probably by a thrust of its venomous sting. The subtle art of the spider avails little against so powerful an adversary, and he generally yields on the first onset.

The large *blue-black* mason-wasp, with beautiful purple wings, attacks and kills the largest grasshoppers, crickets and cockroaches, besides occasionally showing his Herculean prowess in slaying the large black spider of the forest, whose fangs are like blacksmiths' pincers, and whose body, covered with bristly hairs, would be thought safe from the attacks of any *common* enemy. I once witnessed a combat between a mason-wasp and such a spider as I have just described. The spider, though vigorous and active at first, soon appeared as if struck with paralysis, and though not dead, could make no effort to repel its conquering foe. As soon as the spider ceased its exertions, the wasp attempted to drag it under a piece of bark; but the weight was too great for the strength of the wasp—it could scarcely move the body of its victim.

Last summer, I saw one of the black mason-wasps, attack and kill one of the largest of the green-grasshoppers. By cutting off the grasshopper's long legs, he was quickly disabled. The wasp then excavated a hole in the ground, into which it rolled the carcase of the grasshopper, and buried it.

The aphis, or plant-louse frequently inflicts serious damage on the products and plants of the field and garden. Almost every kind of plant has its peculiar species of this insect. It possesses extraordinary powers of reproduction—*nine generations*, according to naturalists, being produced from a single impregnation. Their increase is therefore rapid almost beyond comprehension, and from only a few in the early part of the season, they soon swarm in innumerable numbers. All sorts of young fruit-trees, roses, and garden vegetables of different kinds, are sometimes overrun with them. They suck the juices from the fresh and tender leaves, which soon checks the growth of the plants—producing mildew and blight.

On the plants which are infested with the aphis, there is frequently seen various other kinds of insects, such as ants, flies, bees, the spotted lady-bird (or bug,) &c. Many people suppose that the object of all these insects is the same, that is, to feed on the plant or its juices; but their objects are only similar in one respect—all seek their food, though the food of the different races is quite dissimilar. All the aphis family excrete certain tubes through the posterior parts of their body, a sweet substance sometimes called *honey-dew*, of which many other insects are very fond. The ants, bees and flies are in search of this, and the former show great sagacity in obtaining it. They touch the aphides with their antennæ, which causes them to void the sweet drop, and it is instantly swallowed by the ants. From the constant attendants of ants in the manner described, the aphides have been called "the ants' cows."

The larva of the lady-bird, and the larva of several species of syrphidian flies, feed on the bodies of the aphides, and in many instances devour great numbers of them. Few farmers or gardeners are aware of the great benefit they derive from these rapacious little animals. The past summer, some currant-bushes and snow-ball trees were shown me that were literally covered with aphides. On close examination among the aphides I discovered a few of the larva of the lady-bird and a species of syrphus. As there were but few of these, I concluded they had but just discovered their prey. They continued to increase from day to day, and the aphides soon began to diminish, till in a week's time, scarcely one of the latter could be found.

Provided with a good magnifying-glass, I watched the movements of the aphis-eaters. The larva of the lady-bird and the syrphus, kept up a constant slaughter. The former seized the aphide with its long forceps, and soon sucked out their vitals, leaving nothing but a thin shell, which it threw away. One of them was seen to devour half a dozen aphides in the space of five minutes, and a similar destruction seemed to be kept up by all. The syrphus was attached to the leaf by a glutinous substance, in the midst of the aphides, from which position it constantly supplied itself with victims.

Had not this article been extended to (perhaps) an undue length, I would have given more particular descriptions of these predatory tribes. I trust, however, that what has been said may serve to show the importance of knowing the habits of insects, that we may, especially, be able to

"Distinguish which to slaughter, which to spare."

In a future number, I propose to give drawings of some of the species referred to. W.

ACTION OF MARL AND LIME.

Editors of the Cultivator—In the article on "Manures—Their Nature and Action," in the June number of the *Cultivator*, an allusion was made to a mineral substance found in New-Jersey and farther south, and known as "green sand," which possesses very valuable properties as a manure.

I suppose it would be useless for me to say anything about marl. To all who are interested in it, it is already perhaps sufficiently well known. As stated in the article referred to, "its great value is chiefly due to the potash it contains."

But there is another mineral substance, which is found in a bed extending through a portion of the state from New Egypt to Vincentown, and is found I think, a few miles south of Haddonfield. I allude to what Prof. H. D. Rogers calls "a straw-colored limestone," but more particularly to the thin limestone stratum of the vicinity of Vincentown. This is not so well known nor so extensively found as the marl. Prof. Rogers' analysis of it gives "lime 49.69, carbonic acid 38.31, silica and other impurities, 9.00, water, 3.00—making about 88 per cent. of it carbonate of lime." In speaking of where the beds of limestone had been cut through, by digging a well into the green sand stratum underneath, Prof. Rogers says—"It was in thin irregular beds, separated by incohering sand and calcareous grains, similar to the mixture which composes the rock; its total thickness was about six feet; the organic remains are the same which characterize the limestone of Vincentown." It is now found in places from fifteen to more than twenty feet thick. But it is not the stone, to which I wished more particularly to call attention, but rather "the incohering sand and calcareous grains" by which its strata are separated.

If a test by effervescence with acid would be sufficient to judge by, I should suppose that this incohering sand contains nearly or quite as much carbonate of lime as the stone itself. If so, perhaps it may be called by way of distinction, pulverized limestone.

I suppose this bed of carbonate of lime was not placed there for nothing. In what way it may become useful to man, and to what extent? are questions of some importance. How far will pulverized carbonate of lime answer in the place of quick lime?

I think Liebig advances the idea in his Chemical Letters, that one of the most important uses of lime on land is, that by its caustic property, it may assist in disintegrating the soil, and rendering the alkalis, or potash contained in it, capable of becoming soluble in water, and thus taken up by the fibrous roots of plants requiring it.

And he illustrates this opinion by describing a plan for decomposing feldspar, a mineral which contains potash, and forms a component part of the most widely diffused of the primitive rocks. In this case, I suppose the carbonate of lime would be of but little use.

Yet some farmers who have been in the habit of using lime for many years, say they think a heap of lime, which has lain eighteen months or longer, and thus become principally carbonate, is quite as beneficial to the soil as one spread immediately after slaking.

It is known that almost all marls contain ingredients injurious to vegetation. These are principally copperas and alum. Although some contain a much smaller proportion of them than others; yet it is found that where land has been marled copiously for a number of continued application of it, without lime, is attended with but little beneficial effect, while the soil seems to acquire a strong inclination to produce sorrel. Prof. H. D. Rogers recommends as an antidote to the poisonous principles contained in marl, the use of "caustic or freshly burnt lime." Yet a simple experiment will show that carbonate of lime will decompose copperas or alum, as well as the caustic. Take a little pulverized copperas, and mix it with a similar quantity of this pulverised carbonate of lime. Add a little water to the mixture. The appearance of rust or red oxide of iron in the mixture, will show that the copperas (sulphate of iron) is decomposed; while the effervescence will as surely indicate that the sulphuric is taking the place of the carbonic acid; and the latter being set free, in escaping causes the effervescence. In a similar experiment with alum, in the place of copperas a like effervescence will as readily indicate a mutual decomposition. And a practical agricultural experiment would seem to accord with those of chemistry.

A strip of land which had been marled several times within the last twenty years, (but had received no lime) was covered with a few loads of this pulverized lime. Two years afterwards, the part of the field manured with the lime bore a good growth of clover, while the other portions of it were red with sorrel.

In Playfair's edition of Liebig's Agricultural Chemistry, it is stated, that "in China, the plaster of old kitchens which have no chimneys but an opening at the top, is so much valued as a manure, that they will sometimes put a new plaster on a kitchen for the sake of the old." And the reason offered for the increased value of the plaster, is "The ammonia contained in the fuel forms nitrate of lime with the lime in the mortar." Is there not a portion of ammonia continually escaping in the summer season from every body's barnyard? Would not a small portion of carbonate of lime spread over the yard, be as likely to retain it, as the plaster of a Chinese kitchen?

In the American Farmer's Encyclopedia, article Bones, it is stated that the shells of the oyster, lobster, &c., contain a small proportion of phosphate of lime.

The pulverised portion of this limestone, was without doubt, formed by the decomposition of sea-shells.

Were the marine shells of ancient times composed similarly to those of the present time? or have they been subject to a change in composition? And if they once contained phosphoric acid, would they be likely to retain it through so long an interval? If this lime contains only a little phosphoric acid, those who make use of it need not be at the labor and expense of procuring bone manure for their land.

It is true, there is no mention made of phosphoric acid in connexion with this subject in Prof. Rogers' Geological Survey; but his analysis was only of the stone. Probably, the strata of stone were formed by the shields of some animalculæ, similar to the madripore, and perhaps contained no sulphuric acid; while the pulverized mass which separates them, may have been formed by the disintegration of bones and shells, which were thrown together by the currents of the ocean.

I cannot tell whether any of these speculations are correct; I only claim that the subject is an interesting one; and would be glad either to change my opinions, or be more confirmed in them.

H. Grath, Jr.

New Jersey, July, 1848.

BUTTER FOR THE UNITED STATES NAVY.

You having given the substance of the article published in the Transactions for 1847, in relation to the manufacture of butter for the U. S. Navy, I doubt not it will be acceptable to the readers of the *Cultivator*, to peruse the annexed letter in relation to the subject from J. J. **Hawley**, of Binghamton. I endeavored to obtain the information contained in this letter, previous to the publication of the Transactions, but owing to misapprehension on the part of the gentleman to whom I wrote, I failed to receive it. Dr. A. **Doubleday**, however, on application to him, has procured it, and if anything was wanted, in addition to the facts already given, this letter supplies it, so that there can be no doubt whatever, that our state can in almost any section of it, furnish as good butter as *Orange County*—that will stand the test of tropical climes. Mr. **Hawley** saw butter which was made in *Broome county*, in 1840, and sold in New Bedford after having been a whaling voyage, and at the expiration of *nearly four years from its manufacture*, which was as sweet and in as good condition as when first made. But I refer to the very interesting details in the letter annexed.

B. P. J.

Agricultural Rooms, Albany, August, 1, 1848.

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The idea that no butter made out of Orange county, will "resist the action of tropical climates and preserve its qualities for years," is an utter absurdity. I think, that *not one-third* of the butter sold as "Orange county" is made in that locality. That county has during ten years past, sent out hundreds of emigrants to the counties of Sullivan, Delaware, Chenango, Broome, Tioga, Tompkins, Chemung, and perhaps others in the state of New-York, who have continued the manufacture of butter for market, and who, at the end of each season have been in the habit of transporting their butter in wagons across the country to the different points of shipment in Orange county, and there shipping it as from "Orange county." Many of the persons had, for ten years before emigrating, regular purchasers in New-York for their butter, who it was understood were to take their product each year, when made, and pay the highest market price for it. These relations were in many instances, continued for several years, previous to their emigrating from Orange county, and many now continue them without the least objection being made to the quality of the butter.

The term Orange County Butter seems to be misunderstood. * * It does not mean (as I understand it,) the locality where made, but a peculiar method of manufacture, the perfect neatness and cleanliness of everything about their dairies—the churning the *milk* instead of the cream, and the attention to the quantity and quality of the salt used, are the principal peculiarities. The churning the milk I deem essential to butter intended for long voyages. It gives it a peculiar firmness and fineness of texture, and wax-like appearance, which butter made by churning the clear cream, seldom has. These peculiarities can generally be detected by the eye. There is also a cream-like flavor, in milk-churned butter, which I have never found in butter manufactured in a different manner.

I believe the highest price paid for dairies in New-York, for several years past, has been paid for several dairies from Chemung county. Being at the table of a certain well known *gourmand* in New-York, in the spring of 1847, I remarked the very fine quality of the butter—He replied that such butter could not be made out of Orange county. The conversation continued, until finally the original firkin was brought up, when I found it was branded John Holbert, (Premium.) Mr. Holbert resides in *Chemung county*, and it will be recollected took the *first premium* at the State fair in Saratoga, in 1847, for butter made in June. This gentleman told me, he had his supply of butter *of this dairy*, for several years, of a particular grocer who alone sold it, at 33 cents per lb.

The opinion of the gentleman who has charge of the butter department of the U. S. Navy, "that no butter made out of Orange county, will resist the action of tropical climates," I know to be erroneous. A dairy made in this county, (Broome) has been sent abroad much of the time for ten years past. In 1839 it was sold in St. Croix, to the Governor, for 75 cts. per lb. In 1840, it was sold in New-Bedford, and went a whaling voyage. I saw some of it after the expiration of nearly *four years* from its manufacture, as sweet, and in as good condition as when made. The same dairy has since been sold in New-Orleans, in Natchez, and Mobile, and there never has been any complaint as to its quality.

I shipped some butter, that was the product of this county, to Canton, in 1846, which, under very disadvantageous circumstances, opened as fresh as when made, and proved so good, that the shippers have each year since applied to me for butter for cabin stores for their ships. I broke up the original firkins and procured a quantity of small white oak kegs, which would contain from 15 to 25 lbs. each, and repacked the butter, selecting the best from a large quantity. These kegs, when filled, were put in very large hogsheads, and the interstices filled with rock salt, and the casks placed in the hold of the vessel. This butter when sold, (about eighteen months after its manufacture) was in as good condition as when made. The small kegs were not used in reference to the preservation of the butter, but merely for convenience in retailing at Canton.

The exportation of butter for the supply of the different cities, that are along the southern coast of Asia, is probably destined to be a very considerable business. The entire supply for the immense cities in the possession of the British East India Company being derived from Europe, (mostly from Ireland, but some little from Holland,) and it is usually purchased at home, at a price which would fully pay an American shipper at its destination.

The relative proportion of our county, that is adapted to the finer qualities of butter, is probably as small as any other article of general necessity. But much of the southern tier of counties, and also of the central and northern portions of the State of New-York will, (when well cultivated,) produce the various grasses necessary to give butter the peculiar flavor and aroma of Orange county, when properly manufactured.

The emigrants from Orange county before alluded to, all agree in opinion, that as good butter can be made in their new location as in Orange county. Minnisink is cited in the circular as being the locality producing the best butter in Orange county. A Minnisink dairywoman in this vicinity, who had for many years the reputation of being one of the best in that town, made her first lot of about sixty firkins here last season, and says it was the best she ever made. All the Orange county emigrants agree in opinion, (and many of them are persons of much experience and close observation in their business) that in favorable situations they can produce as much butter and of as good quality as in Orange county. Yours, &c.

J. J. Hawley.

Binghamton, July 24, 1848.

N. B.—It will be seen on reference to the Transactions for 1847, page 45, that at Washington, it is distinctly understood "that no butter can stand the test of foreign climes, that is *not made in Orange county*," and this is what the gentleman connected with the Naval Bureau, understands by Orange County Butter. Mr. Hawley's explanation is what we understand by the designation of *Orange* butter—that which is rightly prepared so as to keep in any clime, and that it is not necessarily or in point of fact made solely in that county.

MANAGEMENT OF BEES.

I have read much written on the subject of Bees, their management, the Bee moth, &c., with but little benefit. I think, (judging from my own experiments, as well as from trial of the recommendations of others,) that a different mode of operation, from what is generally laid down, is necessary to guard against the enemies of bees.

It will be unnecessary for me here to enumerate the many plans and inventions that have been sought out, to guard against the moth, but I would suggest a different plan; though I do not know as it will answer for any other place than the section in which I live. Other places may be far more troubled with them, but I would just say, if they are any worse in any other place than here, they must be bad enough; for few keep bees here but a short time before they are very much injured or entirely run out, if kept on the old plan. When I speak of the old way, I mean letting them swarm as often as they will, and putting swarms into hives by themselves, without any regard to their size or the time they come out.

Most people seem to think the greater number of hives they can count, the better *luck*, as they term it. Now from the experience I have had in keeping bees, a different course should be pursued in order to succeed well; and my own conclusion is not a hasty one, for I have kept bees about twenty years; though during several years of the former part of that time I did not succeed very well; for I used to manage upon the old plan, and at the same time tried many experiments with them, some of which did not succeed as well as I had anticipated; but during the last ten or twelve years I have realized my most sanguine expectations.

My plan is not to count my army by the tents they occupy, but by the working men in them. I have all my hives strongly peopled, that they may not only repel an enemy, but drive them away. When a hive is strongly peopled, none of their common enemies will attack or injure them;—at any rate, it is only weak hives that are attacked by the bee moth, or robbers. I never knew an instance of a strong hive being injured, unless some accident had happened to the comb.

I may be asked how I can have my hives all strongly peopled? It can be easily done, but it requires some experience as well as skill, to do it successfully; but in this the main secret lies. Nearly all the first swarms, which come out before the twentieth of June, will be sufficiently strong, and will not only make honey enough to winter on, but in good seasons will make from two to four boxes (of twelve pounds each,) of surplus honey, that can be removed without impoverishing the hives; but nearly all second swarms need to be reinforced however, it frequently happens that a third swarm comes out so as to put one of them with a second swarm, which generally makes them large enough.* The size of a colony will be better understood by measurement in a hive than any other way. My hives are twelve inches inside and sixteen high in the clear, and when the swarm all settles in the hive, I want them two-thirds full at least; and when they fall short of this standard, I reinforce them till they come up to it. No fears need be entertained of their being too many bees in a hive, for the more bees the more honey they will make in the boxes. I have frequently had two of the first swarms go together, which have filled the hive of bees; such hives generally do best, and make far the most surplus honey; and are much better to go into winter quarters.

Hives frequently cast two and three swarms apiece, which reduces the stock in the old hive so low, that they are unfit for wintering; I let them cast their late and small swarms until all my swarms are sufficiently reinforced, and then, what comes out afterwards, I manage in the following way.

I take a small hive and set it on a table for hiving, put the bees in front of the hive, and start them in moderately, and with a goose quill separate them until I can find the queen, which I destroy. It is necessary to keep a close watch until they all go into the hive, for sometimes there are two or three, and even more queens, in second and third swarms, which, if not destroyed will remain in the hive, and not return to the one from which they came. If they do not go back by night, there is generally a queen left, and when that is the case, just at dark I take the hive and strike it pretty smartly on the table, and jar them out, and examine for another queen. The next morning they generally return to the parent hive.

Hives that have overswarmed themselves, are the ones the bee moths or robbers attack. Now these old feeble hives must be reinforced, or there is danger of their being destroyed by their enemies; or if they escape these there is danger of their dying in the winter in consequence of the want of warmth, being so few in number. It frequently happens that some of these over swarmed hives are old, and unfit for wintering. I take the bees out of such hives, to reinforce weak ones with. This should be done soon after the swarming time is over. With the hives that I have to reinforce, (when I have not old hives to reinforce them with,) I go to some of my strongest hives that have boxes on the top full of honey and bees, and take one or two boxes just as it seems necessary, and put them on the weak ones, in order to make them sufficiently strong for wintering. The bees in the boxes hardly stir for a day or two, then they all agree and go on to work with renewed vigor.

I might here state that I never destroy any bees. Weak hives seldom ever quarrel with their new companions. In swarming time, different swarms seldom disagree, unless the first swarm has been a considerable time in the hive, and the one put with them a much smaller one. If they ever do quarrel, an easy way to stop them is to run a small wire in their hive, and just start the honey in their comb. The uniting swarms should always be done just in the dusk of evening, and by morning they will all be united, when the hive should be returned to its stand. Now I have but little hesitation in saying, that any one keeping bees, whose motto is, "strong hives or none," will have but little cause for complaint from the bee moth. Lotan Smith.

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* I sometimes put three and even four small swarms together.

ECONOMY IN SAVING MANURES.

[The following article is the substance of a report on manures, read before the "Clinton Farmer's Club," by Edward North.]

One of the great secrets of success in the culture of the soil, is *Economy*. This magic word is an "open Sesame" to wealth and independence. In order that the agriculturist may realize the largest profit from his labor and skill, he must be frugal and saving. He must be not more careful to avoid manifest extravagance, than he is to practice a system of rigid economy, which shall look in every direction Argus-eyed; and be applicable to every combination of circumstances.

He must *save* not only at the bung-hole, but also at the spigot, and thus arrest the injury wrought by those small dribbling losses, which viewed separately, appear of no account, while in the aggregate and the long run, they greatly diminish the returns of agricultural industry. In no department of rural labor, is there more to be gained by the exercise of economical ingenuity, than in the making, the saving and the using of manures. We are too much inclined, if I mistake not, to centre our regards upon the barn-yard, the stable, and the lime-kiln—too much inclined to place our main dependance upon these sources of fertilizing and stimulating agents, to the neglect of others not less worthy of attention. The different manures, and materials for creating manure, which may be secured and made available upon the precincts of every husbandman, are very numerous, and as valuable as they are numerous. Among the sources of manure frequently overlooked, or but partially drawn upon, may be mentioned the privy, the ash-bin and wood house; the henroost and pigeon-cote; the sink-drain and wash-tub; the marl-bed and peat swamp; the gullies and forest.

All these are mines of wealth to him who tills the soil, and when brought into full requisition, they have proved instrumental in the production of crops before unanticipated and unknown. The amount of waste that is often permitted by overlooking these deposits of fertilizing substances, cannot be easily and accurately estimated. Yet a single calculation which I have happened upon in my agricultural reading may serve to throw some light upon this matter. "The solid and liquid excrements of a man may be estimated at 1.65 lbs. per diem, or about 614 lbs. per annum. Containing 3 per cent. or 18lbs. of Nitrogen, a sufficient quantity, according to Boussingault, to produce 880 lbs. or about 15 bushels of wheat." Report of the Commissioner of Patents for 1844, p. 384.

Now if a farmer's family consist of five individuals, and the contents of the privy are wasted, there is an annual sacrifice of enough nutrition for growing 70 bushels of wheat. This calculation was made by a distinguished French chemist, and may be relied upon as sufficiently accurate. But even if the contents of the privy were less valuable, by a half, than is here estimated, they ought still to arrest attention and provoke experiments with those who are solicitous to improve their farms and husband their resources.

The wasting of ashes is less common than that of bones. Yet the former are often suffered to lie in useless and unsightly heaps, when thrown from the leach tub; while the latter, of which every housekeeper may command a certain quantity, are seldom subjected to the process of burning and pulverizing, which converts them into an excellent manure. The chief constituent in the bones of all animals is the phosphate of lime, a substance absolutely necessary to the healthy vegetation of plants. The other principal ingredients are carbonate of lime and cartilaginous matter, both of which when decomposed, enter largely into the synthesis of vegetable substances. The cultivator of the soil will not be incredulous as to the power of vegetables to feed upon and digest the hard substance of crushed bones, when he is reminded that the ashes of wheat straw are composed of 61½ per cent. of Silica, or flint, which is much harder than the hardest bone." Loudon's Magazine of Gardening, vol. 2, p. 319.

By carefully gathering up, from time to time, what is deposited beneath the perches of the hen-house and pigeon-cote, one may not only improve the health and fecundity of his fowls, but may also enrich himself with home-made *guano*, scarcely inferior to that brought from distant foreign shores, which smells so rankly of money as to find but little favor with any but amateur farmers.

The amount of fertilization that is pounded and scrubbed out of our clothes in the course of a year, would probably startle one who should see it written down in truthful figures. The farmer or gardener who suffers the precious contents of the wash-tub to be thrown away and wasted, especially when his plants and trees are withering beneath the heat of the dog-star, has reason to reproach himself with the folly of "spilling at the bung-hole."

Monday is a day of great rejoicing to trees, and vegetables, when they are allowed to count on a thorough soaking about sunset, with rich saponaceous liquid, furnished by the laundress.

I have been told of a farmer, who after having suffered the wash-tubs to be emptied into a filthy drain, deliberately proceeded to deluge his pet garden sauce with ice-cold water fresh pumped from the well. I shall not credit the statement without further evidence. Sometimes it happens that peach stones or pear pits, get planted, either by accident or whim, hard by the kitchen door. Trees so situated, almost invariably prove thrifty and productive. Their bearing qualities and the exquisite flavor of their fruit, are extolled by individuals in private, and by committees in public. All the world wonders how it came to pass that trees which seem to have sprung from the soil without asking any body's advice or permission, and which have reached their maturity without any body's nursing, should be so very healthy and prolific. The true explanation of this wonder, doubtless is, that the earth which such trees inhabit is fattened by the slops and dregs of the kitchen; and we are thus sharply rebuked for our want of economy in saving a species of manure so precious and so convenient. Nature herself is fond of elaborating manure, and as skilfull too, as she is fond. If we were half as industrious and efficient, or were more willing to avail ourselves of her proffered assistance, we should less often be heard to complain of poor and ungrateful soils. The little stream that divides the pasture or meadow, is ever busy at its task in collecting aliment for grasses and trees. To the products of its inanimate industry we are always welcome. In the silent woods, again, nature is constantly accumulating stores of fertilizing substance.

The leaves which blanket the earth in autumn, are at once brought under the influence of her subtle chemistry, and thus prepared for contributing to other and more durable forms of vegetable growth. The frugal farmer will not forget the forest. He will bring it under stated contribution. If gathered in autumn. leaves form excellent absorbents for the precious fluids so abundant in the stable and barn-yard, yet so often suffered to float off and evaporate. Or if left to decay where they fall, leaves make a valuable muck, especially when mixed with lime or ashes.

In Great Britain, where land commands a much higher price than with us, the principles of economy which I am aiming to recommend, have long since been faithfully tested, and are now generally observed in the management of soils. I have somewhere seen mention made of an English Cottage, whose garden was made to *manure itself*, and at the end of twenty years, without having made the acquaintance of a single forkful of barn-yard dung, the tilth was deeper, mellower, richer; the yield more abundant and of better quality than ever before. The manuring of the garden was managed somewhat after this fashion: All the refuse of the garden, such as leaves, vines, grass, haulm and weeds, was carefully saved and thrown into a pile. Every fragment of rubbish was gathered up and nothing wasted. To this were added scrapings from the road, drainings from the kitchen sink, and soot from the chimney. The liquid from the chambers was daily emptied upon this heap, and the whole was repeatedly turned over and intimately mixed, until the vegetable ingredients were decomposed. Once a year the garden received a good dressing of this manure, and with thorough cultivation the result was what I have indicated.

Before bringing these suggestions to a close, I must be allowed again to refer to the contents of the privy. On account of the repugnance which they inspire, fecal substances are often wholly discarded as an auxiliary of production, or else are so improperly managed as to occasion great waste.

It has been settled by experiment, that the sulphate of iron or copperas, is both efficient and inexpensive as an agent for disinfecting fecal matters, by changing the ammonia into a fixed salt. A hundred pounds of copperas may be had at the shops for about eleven shillings, and if a solution of this be occasionally applied to the privy, it will cause the noisome effluvia to disappear.

A two-fold purpose will thus be accomplished. By fixing the volatile ammonia, in which resides a fertilizing energy, the value of excremental manures is greatly enhanced, while the imprisonment of all offensive odors, renders them capable of being transported, diluted and applied, without any inconvenience or disgust. It is a point worthy of investigation, whether the application of sulphate of iron in solution, would not be of good service in the barn-yard. If each new layer added to the manure heap were sprinkled with copperas water, much of that most important element, the ammonia, (which is otherwise lost by reason of its volatility,) would be changed into a fixed salt, and thus saved.

For the facts which I have here submitted in regard to the employment of copperas as a disinfecting agent, I am indebted to the Report of the Commissioner of Patents, for the year 1844.

THE PROPER POINTS OF MILCH COWS.

I agree with the remark of "A Dairyman," in the August Cultivator, that we should not be satisfied with dairy qualities *only*, in milch cows. I am convinced, from several years' experience in keeping cows, that the best dairy qualities may be united with neat forms, good constitutions, good quality of flesh, and a tendency to thrive; and that cows combining these qualities are far more profitable than others.

This section has long been somewhat noted for good working oxen; the team work of our farms is performed by them, and they are always in demand, at from $125 to $175 per pair,—prices which render it an object to produce the best. Many of our farmers, therefore, in selecting or breeding their cows, attend not only to their points for the dairy, but to those also which denote their capacity to produce valuable oxen. They obtain strong, well proportioned, clean-limbed, hardy cows; and it has been found that such frequently produce as much *butter*, though they may not give the greatest quantity of milk, as any cows we have. They are easily kept, are long-lived, and free from disease; and their progeny, where proper regard is paid to the character of the sire, are valuable either for cows or oxen.

Some valuable ideas, in regard to milch cows, are given in an able article on the Jersey or Alderney cow, by Le Couteur, published in the fifth volume of the Royal Agricultural Society's Transactions. The cows of this breed have for many years been held in high estimation for the dairy, or more especially for butter-making. Formerly, little or no attention was paid to the shape of the animal; the Jersey farmer sought only for such as were good for the production of rich milk; "he was content," says Le Couteur, "to possess an ugly, ill-formed cow with flat sides, wide between the ribs and hips, cat-hammed, narrow and high hips, with a hollow back."

"Of the ancient race, it was stated, perhaps with truth, that it had no tendency to fatten; indeed, some of the old breed were so ungainly high-boned, and ragged in form, Meg Merrilies of cows, that no attempt to fatten them might succeed."

But careful attention in breeding has, we are told, greatly remedied this defect. "By having studied the habits of a good cow with a little more tendency to fatten than others, and crossing her with a fleshy, well-conditioned bull of a stock that was also known to produce quality and quantity of butter, the next generation has proved of a rounder form, with a tendency to make fat, without having lost the butyraceous nature."

The society above alluded to have a "scale of points" for bulls, and another for cows, which are as follows:—

	Scale of Points for Bulls.	P'ts.
Art. I.	Purity of breed on male and female sides, reputed for having produced rich and yellow butter, ...	4
II.	Head fine and tapering, cheek small, muzzle fine and encircled with white, nostrils high and open, horns polished, crumpled, not too thick at the base, and tapering, tipped with black; ears small, of an orange color within, eye full and lively, ...	8
III.	Neck fine and lightly placed on the shoulders; chest broad, barrel hooped and deep, well ribbed home to the hips, ...	3
IV.	Back straight from the withers to the setting of the tail, at right angles to the tail. Tail fine, hanging two inches below the hock, ...	2
V.	Hide thin and moveable, mellow, well covered with soft and fine hair, ...	3
VI.	Fore-arm large and powerful, legs short and straight, swelling and full above the knee,	

	and fine below it, ...	2
VII.	Hind quarters from the huckle to the point of the rump, long and well filled up; the legs not to cross behind in walking,.....	2
VIII.	Growth, ...	1
IX.	General appearance,.....................	2
		—
	Perfection,.............................	28

No prize shall be awarded to a bull having less than 20 points.

	Scale of Points for Cows and Heifers.	P'ts.
Art. I.	Breed, on male and female sides, reputed for producing rich and yellow butter,....	4
II.	Head small, fine and tapering; eye full and lively. Muzzle fine and encircled with white; horns polished and a little crumpled, tipped with black; ears small, of an orange color within, ...	8
III.	Back straight from the withers to the setting of the tail; chest deep, and nearly of a line with the belly,..................	4
IV.	Hide thin, movable, but not too loose, well covered with fine soft hair, ...	2
V.	Barrel hooped and deep, well ribbed home, having but little space between the ribs and hips; tail fine, hanging two inches below the hook,......................	4
VI.	Fore legs straight and fine, thighs full and long, close together when viewed from behind; hind legs short, and bones rather fine; hoof small; hind legs not to cross in walking,.........................	2
VII.	Udder full, well up behind; teats large and squarely placed, being wide apart; milk veins large and swelling,...............	4
VIII.	Growth, ...	1
IX.	General appearance,.....................	2
		—
	Perfection for cows,....................	30

Two points shall be deducted from the number required for perfection on heifers, as their udder and milk veins cannot be fully developed. A heifer will therefore be considered perfect at 28 points.

No prize shall be awarded to cows, or heifers having less than 21 points.

These rules, with but few exceptions, would be approved by our best dairymen and stock raisers. In one point, that of a "*thin hide*," a variation would be preferred for so severe a climate as ours. A hide of more *substance*, but still "mellow" and elastic, would better enable the animal to bear the inclemencies of the weather, and would not in the least detract from its thrift or other good qualities.

Le Couteur states that the course pursued by the society has produced a great improvement in the Jersey cows; for while they are brought so near the standard of perfection that some are awarded nearly every good point in the scale, they are fully equal on the average, as dairy cows, to the old stock,—some of the improved variety giving fourteen pounds of butter in a week, and ten pounds per week being common, through the spring and summer months; and they give milk till within six weeks of parturition.

On applying the scale of points to the "Old Jersey Cow," the following points, according to Le Couteur, would be *taken from* her, viz:—

"Cheek large, 1—ewe neck, 1—hollow back, 1—cat ham, 1—flat side, 1—not ribbed home, 1—hind legs crooked, 1—general appearance, 1. In all 8; these deducted from 26, the number less the pedigree, leaves 18, which was about the average number the best cows had at the formation of the society."

Mr. Colman, in his "European Agriculture," speaks of the successful efforts which have been made to improve the Jersey or Alderney cows; and, as a specimen of what has been accomplished, refers to a young cow of this breed, which he saw at one of the cattle-shows. He thinks she was the handsomest of the cow kind he ever saw, and "gave the best promise of what a cow should be. She was of moderate size, compact, and well shaped, of that yellowish-dun color which generally characterizes the breed, with a large and golden udder, ears of an orange color inside, a thin and clean neck, and the bright eye of a gazelle."

E. A. G.

Worcester co., Mass., Aug., 1848.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Supports for Climbing Roses.

In ornamental gardening, it must always afford the mind relief to escape from the stiffness of artificial arrangement, to the freedom and grace of skilful combination of natural and beautiful forms and colors. It was with this feeling that we were particularly pleased with the late remarks of an English writer on the training of tall and climbing roses, on such trees as afford the best natural supports, instead of painted sticks or cast iron rods. Where, in all the cut and clipped pillars, is there anything equal to the wild Michigan rose of the west, ascending to the tops of forest trees, and covering them with its variegated bloom? An imitation, with improvements, of these natural beauties, cannot fail to be eminently pleasing.

The following extracts are worthy the attention of all gardeners of taste—but the practical fact must not however, be forgotten, that well prepared earth, and good cultivation, at least for a few years, will be essential to success:

"The mountain-ash, when growing as a tree, is admirably suited to prop a climbing rose. Its foliage is pinnate, and not to be easily distinguished from the foliage of the rose; the color of its trunk and that of the stem of the rose, are the same ashy gray; in size it is decidedly a small growing tree; in habit it is stiff and formal, with spray full of antlers or little hooks, all tending upwards, just as if Dame Nature had made a tree of pegs to hang her rosy mantle on." "Now, lest any one should imagine that I think of filling up a flower-garden with mountain-ash trees, I must beg leave to state, that where there is room for the rose-trees that I propose, there will be no lack of space for the stakes or props, for they will be within the rose-trees. These rose-trees were never intended for small gardens, and scarcely for large ones; they are the gigantic materials for fields of flowers high and wide, of long and deep avenues, the foreground figures fair and fragrant in the glades and dells of park scenery, where rides and drives invite. The bramble is another brother of the rose family, and this, as well as the mountain ash, rambles at large by ravine and crag, growing freely in any reasonable situation, and in spots where neither grazing nor tillage can be carried on. Surely, then, we may reasonably hope to establish a climbing rose in a locality where two brothers of the same family already flourish.

"The dwarf or weeping elm, engrafted on the common elm, forms an elegant head of this form; and, as these artificial drooping-headed trees are monsters, and grow slowly, they may be kept in dressed ground in small compass for many years. The one which I have before me has been four years planted; and one or two others, about ten years planted, have yet but very small heads. I may here mention that the young shoots of the elm resemble an immense pinnate leaf, and thus the leaf of the rose harmonises better with the foliage of the elm than I was led to expect before I made the comparison with the rose and elm twigs united.

"The weeping ash makes an admirable trellis for a climbing, or rather a trailing rose, and having pinnate leaves, the harmony of the foliage with that of the rose is complete. Nothing but a figure drawn accurately to a scale can give an idea of the excellent habit of this tree, standing as it does on a clean single stem, and forming a globular head with a fine bold outline, which may be varied by pruning to form an umbrella or semi-globular head, or may be allowed to feather down to the ground, and form an egg-shaped tent.

"Every weeping tree gives an idea of being depressed, and its very name 'weeping' implies a lack of comfort; therefore it should not be alone, but have a partner, whose rosy face should look upward, and at the same time look light and cheerful. To intertwine a weeping ash with roses would seem to mingle joy with its weeping, and make a striking contrast, since it could not fail to excite surprise to see a tree that usually hangs its head, and never shows a flower, come forth at last arrayed in such a bloom.

"Various devices have been resorted to, to hide the unsightly shank or stem of the standard rose, with more or less effect. I have sowed sweet peas around some, and planted other climbing plants round others, and have succeeded very well sometimes with such twiners as the ipomœas, &c., forming a cone of elegant flowers, and making the rose-stake serviceable to support a succession of flowers after the roses had faded. Still these creatures of a day, the ipomœas, &c., deserted me in my utmost need, for the least foul weather made them useless; and if they grew freely, they would not stop at any reasonable length, and, being so delicate when young, the smallest accident was sufficient to make a blank. The want of evergreens in a flower-garden in winter has long been felt, and, in short, to obtain a succession of beautiful living objects is the aim of every gardener in planting a garden.

"Now in this garden there exists, whether by design or accident I know not, a thicket of tall yew trees, and in front of these some very tall rhododendrons, and drawn up between the yews and rhododendrons, there stands a fine rose-bush, and, after the rhododendrons have flowered and faded, the rose blooms in the face of this "dismal grove of sable yew." And it is to this contrast of bright rose-color against dark green that I would invite notice: it sets off the rose to the greatest advantage, and always attracts attention, it being altogether unlooked for from such a sombre subject as the yew to wear a blush or other rosy hue upon its sullen face. Now, although the common yew tree be well adapted to support a climbing or other rose, from its patiently enduring to be clipped or pruned into any reasonable or even unreasonable form, I would prefer the Irish yew, and make the head of the rose stand high enough to bloom above the yew. It is the ordinary system that nature follows to elévate the panicle or cluster of flowers of a plant above the foliage. By this combination we get rid of the unsightly rose-stake, by effectually hiding it in the thick foliage of the yew, and, instead of a leafless rose, with a long grey switch of a stem tied to round iron or square tree all the winter, we have an elegant evergreen tree, admirably suited to the stiff formal lines of geometrical flower-gardens; and surely a crown of roses, if properly worn, would set off to advantage the staid and sober virtues of the upright yew; neither would it derogate from its dignity thus to become handmaid to the queen of flowers."

The Circle of Fruits.

Are our farmers,—or such of them as have abundant means for this purpose,—supplied with good fruit during the whole twelve months? Is there any one commodity, more calculated to increase the pleasures of the country, and to render home attractive to young people, than fine, ripe, fresh fruit, of one's own raising, during the entire season?

Many have adopted a very erroneous opinion, and suppose the "fruit season" to be a small portion of the year. A good selection would extend the period of actual bearing and ripening in the open air, to nearly six months; and such kinds as possess keeping properties, if in sufficient quantity, would supply the other six. The first fruits ripen, even so far north as Albany and Rochester, by the first day of summer, and two weeks earlier at Philadelphia and New-York. Three varieties of the cherry,—the Early May, May Bigarreau, and Early Purple Guigne,—mature stimultaneously with the Duke of Kent and Large Early Scarlet Strawberries; a host of other fine varieties of both these kinds immediately succeed them. Currants and Raspberries soon join the list, the Primordian plum, the Amire Joannet and Madeleine pears, and several delicious Apricots are on hand by wheat harvest; after which the profusion of peaches, pears, apples, plums, grapes, &c., furnish the richest supplies through autumn. Grapes and pears may be kept till spring, and apples till the succeeding summer. But, let it be remembered, that if the *long-keepers* are not laid in in very liberal quantities, the stores will soon be exhausted. The loss by unavoidable decay, as well as by consumption, must be allowed for. An excellent mode of keeping winter and spring apples, in the absence of a better, was this: "Lock them up in a cool, dry cellar, and hide the key." The error was in the limited supply; its correction, is to supersede the necessity by an abundant store. Every cultivator, therefore, while he plants liberally of the earliest ripening varieties, must plant still more liberally of long keepers; for while the former are soon succeeded by others, the latter must extend their benefits through a long and otherwise dreary period.

The Tree Pœonia.

Among all the fine and newly introduced shrubs, whether tender or hardy, nothing, we believe, will compare with the old Banks' Tree Pœonia. It endures the severest winters of western New-York, without the slightest injury, and will flourish with the most common cultivation in any good soil. From its slow growth several years are required before its full beauty is developed. A plant in the writer's garden, about seven years old, presents in its mass of branches and foliage a hemispherical form, and is about three feet high and five feet in horizontal diameter; and during the flowering season the present year, bore seventy flowers, all in bloom together, densely double, and varying each from five to six inches in diameter.

LARGE PEACHES.—The Ohio Cultivator states that very large peaches were exhibited at the Fair of the Columbus Horticultural Society, one measuring a foot in circumference [about 4 inches through,] and weighing 14 ounces. We believe the largest peach on authentic record, is that stated on the authority of George Lindley, in his "Guide to the Orchard," which was 14 inches in circumference. It had received the highest culture on a wall.

Fall Transplanting.

Persons of limited experience differ in their opinions, as to the relative advantage of spring and fall for transplanting trees, while the most experienced fruit growers prefer the fall for all hardy kinds.

Some believe that the apple, pear, plum, &c., can be moved with the least injury in the fall; while the peach and apricot will succeed best in the spring. Mr. Downing says, in relation to the peach,—"North of New-York, it is better always to make plantations in the spring. South of that limit, it may usually be done with equal advantage in autumn."

My experience has confirmed me in the opinion, that in our latitude fall planting for the peach is better than spring, if set on dry ground; and they should be placed on no other.

On the 5th, 6th, 8th, and 9th of November last, I set in the orchard one thousand five hundred, worked on budded peach trees; and now, on examining them, find that all are alive but ten; the trees are not only alive, but are making a good growth, so that the rows can be seen half a mile.

I have six hundred peach trees, which have been in the orchard from three to five years, the most of which were transplanted in the fall, with success equal to those set last autumn.

The manner of preparing the ground, and treatment of those set last fall, has been as follows: The field was sowed to buckwheat last season; after that was harvested, straight furrows were plowed one rod apart, then furrows were run the other way the same distance; where the furrows crossed each other was a mark for a tree, and the plowing assisted in digging the holes. The roots were set no deeper than the plow run; they were hilled up a little more than would be required for spring planting.

Early in the spring they were examined, to see whether all had kept their position, and if the frost had started any during the winter they were attended to. About the middle of June each row was plowed, the same as a row of corn, with a two horse team, having a short whiffletree for the off side horse; two men followed the plow and hoed each tree.

The ground has since been plowed clean and sowed to buckwheat, but none allowed to grow within two feet of the trees.

This field occupies a high and bleak position; front being a level eminence, the balance sloping north and west. E. C. Frost. *Seneca Lake, Highland Nurseries, Catharine, Aug. 1st*, 1848.

Raising Pear Trees From Seed.

A series of questions in regard to raising pear stocks having appeared in the *Massachusetts Plowman*, they were answered in a very judicious and clear manner by James W. Russell, of Nelson, N. H. The questions and answers are as follows:

1st. What kind of soil suits the pear seedling the best?

Ans. A deep mellow loam from 18 in. to 2 ft. deep on *clay* or hard pan bottom.

2d. What kind of manure is best?

Ans. Compost manure that has been thoroughly worked, until it has in some measure the appearance of an ash heap.

3d. When is the best time for sowing the seed?

Ans. November, as late in the month as the ground can be worked.

4th. What kind of pears are best for seed?

Ans. The wild or Perry pear.

5th. How long time should they be allowed to grow in the seed-bed before they are transplanted?

Ans. Sixteen months from the time of sowing the seed, or plant out into Nursery Rows as early in the spring as the ground can be worked.

6th. Is not the tap root essential to a vigorous growth of the young stock the first year?

Ans. Yes, it is.

7th. Should they be allowed to remain in the ground without being taken up the first year? If so, what is the best way to protect them from frost?

Ans. By mulching with horse manure 3 or 4 inches thick amongst the plants.

8th. Is there any remedy for the blasts which strikes the leaves during summer, thereby stopping the growth of the young tree at once?

Ans. Great depth of soil, and a slight mulching when the drouth commences.

9th. What is the best method of destroying the lice which feed upon the young stock, and check its growth while they remain, if not for the remaining part of the season?

Ans. A strong decoction of tobacco-water, with a small portion of urine from the cow mixed with it; the young stocks must be *immersed* in this fluid. It will be seen that a wide and shallow vessel will be needed for this purpose to hold the wash; from three to six of the young stocks may be *immersed* at once. It should be remembered that a cloudy day, or to commence *three hours* before sunset, should be the preferred time to perform this important business.

10th. Finally, how should the soil be best prepared for the growth of the young stock?

Ans. By trenching the ground two feet deep, and by digging in a bountiful dressing of the aforesaid compost manure, before the sowing of the seed and before transplanting the stocks into Nursery Rows.

Finally, by keeping the ground clear of weeds, and frequent hoeing through the season, the cultivator may have every reason to expect that his labors will be crowned with success.

Tongue or Splice Grafting.

Editors of the Cultivator—I notice the mode of grafting small trees pointed out by E. M. Hoyt, (pp. 214, 215,) in the July No. of your paper.

I would suggest as an improvement upon this mode, a plan which I have practiced with success, (and which I believe is common among nurserymen,) that of making a split in both stock and scion, and dovetailing, as it were, the two together, taking care always that there shall be a meeting of the inner bark of the stock and scion on one side at least; then wind round soft basswood matting, to keep the scion in place, and covering the parts with grafting wax or grafting clay, applied over the matting to exclude the air.

The superiority of this mode, commonly called tongue or splice grafting, consists in the support afforded by the tongue, (or the dovetailing of the parts,) to the scion; it is much less liable to get displaced, in applying the covering to protect the parts from the air, than the mode practiced by Mr. Hoyt This mode of tongue-grafting, is performed by many upon small trees, without putting any bandage round the parts; but in this case, the stock is usually cut below the surface of the soil, the scion is then placed properly upon the stock, and the earth drawn up over the stock, leaving merely the tip of the scion exposed to the air. Nine in ten of the scions thus inserted are sure to live; indeed the work must be done in a very bungling manner, where stock and scion are both in good condition, if there is a failure.

Whip, tongue, or splice grafting, may be performed upon small stocks in the house, as well or better than any where else,—and earlier in the season than it would be comfortable to perform it in the open field.

Suppose for instance you have a hundred seedling pear or apple trees which you wish to work, of the 2d or third years' growth. The stocks will be from the size of a goose-quill up to about half an inch in diameter.

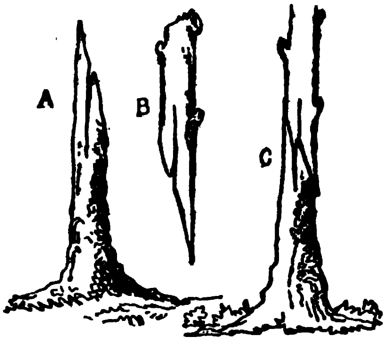
The stocks, if not already in the cellar, may be carefully raised from the ground and brought into the cellar, and the roots covered either with earth, sand, or moss, to keep them moist; a dozen or so of the stocks may be brought from the cellar to the operating room, which grafted, bandages and wax or clay applied, and then returned to the cellar again, to be set out in the nursery or wherever else wanted at a convenient season, taking care that the roots do not become dry by a continued exposure to the air. Should the operator be short of stocks for his scions, he may work his grafts upon pieces of the roots of the same kind of trees as the scions; that is, apple scions upon apple roots, pear scions upon pear roots, and never fear for the result; the labor is little, the success almost certain; I have tried it and speak somewhat from experience. Again, suppose the operator to be where choice fruit is found in the autumn, he may cut scions then and preserve them through the winter in his cellar, by setting the ends in sand, and graft in the spring.

I, in one instance, cut scions in October some forty miles from home, carried them home in my valise, preserved them in sand through the winter, and set them the next spring; the scions are now growing and doing well.

Some are fastidious about the covering they place around the stock and scions in grafting. I have tried grafting wax and grafting clay, prepared in various ways, and have not been able to discover any essential difference in the growth of scions and health of the stock, whether wax or clay was the covering material; of the two, I prefer wax, as being neater and more convenient to use. Grafting in orchards is best performed by two hands at least; one prepares the limbs, smooths the ends after the cut of the saw, and applies the wax after the scions are set; the other prepares and sets the scions, and also aids in sawing off the limbs to be grafted on.

The cut accompanying the Hoyt mode of grafting represents a smooth slope of both stock and scion.

This, you will readily perceive is more likely to be displaced than the following or tongued mode.



A. *Stock.* B. *Scion.* C. *The two united.*

Let any one wishing to try this method, first take an apple tree shoot, without reference to having it live; cut it off in a sloping direction, make the splits in the severed parts, and unite them by inserting the tongue of one into the split in the other, two or three trials will give the learner the right idea; always remembering that the slits are to be made in such part as will allow the largest surface of the stock and scion coming in contact at the outer edge of one side, so that the bark and sap-wood of stock and scion may come in contact on one side at least; I say one side, because the stock may be larger than the scion, and vice versa.
W. N. Green. *Worcester, Mass., July* 10, 1848.

Profits of the Strawberry Culture.

Mr. D. D. T. Moore, of Watervliet has about an acre of ground which has been planted to strawberries three years. He paid sixty dollars for the land, it being a part of a farm which he purchased at that price per acre. The strawberries have paid for the land, and leave a nett profit of nearly $200. The past season, the strawberry ground has not been as productive as usual—it yielded 4,000 baskets, (three baskets to the quart,) and brought in the aggregate about $150. Mr. M. thinks it would render the strawberry culture in this vicinity more profitable if more persons would engage in it. The reason he gives for this opinion is, that those who buy and sell strawberries in the Albany and Troy markets, now oblige the producers in this neighborhood to sell at their prices. They do this by sending their agents through the New-York markets, after the sales for the city are principally closed for the day, and buying up such as are left at low prices—then making the producers here submit to corresponding prices, they control the markets. Mr. M. states that from 100 to 150 dollars' worth per day are brought here from New-York during the strawberry season. There should be enough raised here to establish prices, independent of the dealers who only purchase to sell again.

Fumigating Plum Trees.

In the notice of a late horticultural meeting at Zanesville, Ohio, (reported in the *Gazette*,) it is stated that Caleb Hall presented fine specimens of plums, of which he has this year a good crop. He was formerly much annoyed by the curculio, but "in 1845 he fumigated his trees with brimstone, and repeated the operation in 1846, and both those years had good crops; for besides what his family used, he sold in market about $20 worth per annum. In 1847 he did not use the brimstone, and did not, to use his own words 'get enough to make a pie.' In 1848, he again used the brimstone and has a fine crop. He says he gives the naked fact, without saying how far it may be made a perfect remedy for the evil." We know friend Hall to be a careful and intelligent cultivator. Will he be so good as to furnish us with the particulars in regard to this matter? stating how often the trees were smoked, &c.

Expelling the Curculio.—The Cultivator contains directions to destroy or repel the Curculio, that pest to choice fruit. The method I pursue to destroy them, is effectual and simple. At the time the fruit is liable to injury from attacks of the curculio, I shake the trees violently during heavy showers, and catch them in my umbrella, or they are beaten to the ground to be drowned or picked up by the poultry. When timely showers do not occur, I make a blaze of straw or shavings in a kettle, after dark, then shake the trees and disturb or destroy them in that way. A. B.
Rightstown, Pa., June, 1848.

Influence of the Graft.—Dr. Kirtland says, "a graft of the Green Newtown Pippin will invariably render the *bark* rough and black, (the habit of the variety,) within three years after its insertion.

Changing the bearing year of an Apple tree. R. Manning of Salem, with several hours' labor, cut off all the blossoms from a Baldwin apple tree, in the spring of its bearing year. The consequence was, the bearing year was completely changed, the bearing years have become fruitful, and vice versa.

The Nursery Business.

The great increase in the number of nurseries for the raising of fruit trees, within the past few years, shows the attention which the business has drawn to it, as well as the interest in the public generally to procure fruit. Very vague and indefinite are the notions of many respecting it; large numbers engage in it with the belief that it is the sure road to fortune; and others suppose that the prices paid for fruit trees are too high, and that half their money thus expended goes to make the nurseryman rich, and hence this money is grudgingly bestowed, and trees more sparingly planted.

We believe a more general knowledge of the real nature of this business, would be useful in many ways, and prevent disappointment to beginners, and consequently tend to success in cases which are now accompanied with failure. Many have noticed the great benefit which has been derived in those parts of the country where nurseries were early established, in the number and quantity of fine fruits which now exist. The successful establishment of nurseries, becomes therefore, a public benefit; and it can hardly fail to be useful to point out to those engaging in the business, the costs as well as the profits which are to be expected.

A brief estimate of the cost of raising a nursery of ten acres, may assist in placing the business in its true light. Nearly all nurseries of much size or character in this State are near cities,—because they are found most profitable in such localities,—where land costs from $300 to 500 per acre, the yearly interest on which would be $21 to $35 per acre, and the rent not less. Taking $28 as the average, the rent of ten acres would be $280 per annum. To keep a nursery of this size in *proper order*, at least four hands on an average, and one horse would be required; with board and feed, the right sort could not be had for less than $750. The materials to stock such a nursery would vary greatly with its character and with circumstances; but we will call it $500.* To manure and drain the land properly, and bring it to a suitable condition, could not be less than $50 per acre. Advertising, printing catalogues, procuring tools, materials for packing trees, &c., would be $100 per year. The yearly cost of seeds and collecting stocks, &c., might vary from $50 to $1,000, according to circumstances, or the enterprize of the nurseryman, but we will call it $200. There are many other items of a smaller nature which we do not take into account. The whole cost, therefore, of a ten acre nursery for five years, the average growth of saleable trees, would be as follows:—

Rent $280×5 years with interest,		$1611
Labor, 750×5 years,	3750	
Interest,	565	
		4310
Stock, $500, with interest,		701
Manure, &c., 500 with interest,		701
Printing, tools, &c.,	500	
Interest,	77	
		577
Seeds, stocks, &c.,	1000	
Interest,	322	
		1322
Total cost in 5 years,		$9222

Or $1844 per year.

In computing, compound interest is reckoned, and when the entire outlay was at the beginning, the interest on the whole is taken: where yearly expenses are estimated, interest on the successively accumulating sum only, is allowed. The aggregate cost would be less where land is cheaper, but the profits in such cases, from a want of facilities, would be reduced still lower.

To estimate the actual value of such a nursery would be nearly impossible. The accidents which befal young trees are so numerous, that to say how many may become actually fine saleable trees, would be entirely conjectural. Many failures occur,—sometimes thousands are killed in a single winter by the heaving of the soil—or by severe or unusual winters—or by freezing of the inserted bud—or by breaking down under deep snow—or by drying of the grafts—by severe drouth—by ungenial soil—or by all these causes more or less combined. We have known different nurserymen expend hundreds, and in some cases thousands of dollars in attempting to raise certain kinds of trees, on land naturally unsuited to them, though highly manured, without receiving ten per cent on the outlay; we have known the value of thousands of dollars destroyed in one winter by frost in a single nursery; we have seen young and tender trees perish by tens of thousands in the excessive drouth of a summer. The facilities for disposing of trees, also, are greatly influenced by circumstances. Sometimes the demand for a particular variety may be great; in a few years it may become unsaleable, or be eclipsed by others not always better, and large sacrifices result from such overstocked market. Large deductions must often be made to agents, for it rarely happens that a nurseryman is able to dispose of his entire stock at full retail prices.

We have already shown that a ten-acre nursery, if properly conducted, costs nearly $1,000 a year—taking every thing into account, it would probably exceed this sum. The profits must come from one-fifth, or two and a-half acres yearly average. The superintendent or proprietor of such a nursery, who is his own salesman, bookkeeper, clerk, traveller, and general manager, would hardly expect less than five hundred dollars per year for his services; especially if from this amount he had to pay house rent, and furnish his family (if he has one) with food, clothing and fuel, to say nothing of paying doctors' bills. Twenty-five hundred dollars must come yearly from two and a-half acres; and when it is remembered that, in usual practice, not half the trees planted ever attain a marketable appearance, and that there are in fact often not more than one thousand good trees on two and a-half acres, which at this rate would have to be sold at twenty-five cents each, as an average,—it will be perceived that the present prices of trees cannot be much reduced except at a loss. Extreme cases occasionally occur of a much greater amount of good trees per acre; but formidable losses also occur, greatly reducing the average. In conclusion, it may be therefore remarked, that this, like all other kinds of business, requiring judgment, activity, vigilance and intelligence, may if industriously pursued, afford a return for the labor bestowed. We have known a few men who have thus accumulated comfortable estates—we have known a larger number who have either lost or become insolvent—and a still larger number who have just succeeded in making a living.

The question often arises, whether the farmer can most cheaply raise his own trees or purchase them. If he has some knowledge of the business, trees of good varieties to propagate, and considerable leisure, he may easily raise them, otherwise not. Whatever is done by wholesale, is usually most cheaply done; and this is especially the case where new varieties are to be introduced. The nurseryman may procure such, and furnish a hundred or a thousand, at a lower rate than an amateur could procure it from the same source, and raise but a single tree.

ERRATUM.—p. 217, line 3d from bottom of 2d column, for "Eastern pippin," read *Easter Pippin*.

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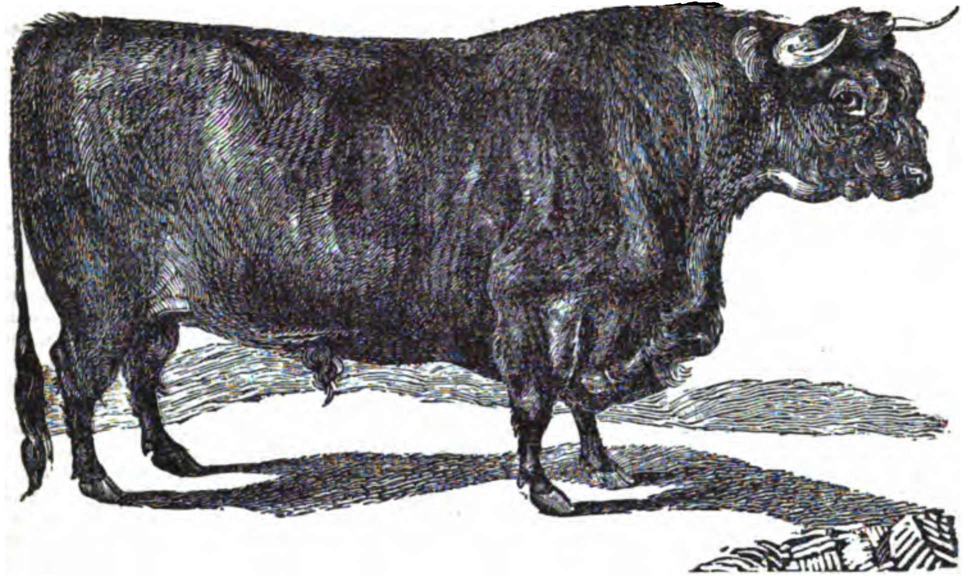
* The constant renewals, and procuring new varieties, &c., would about renew this amount by the end of the first five or six years, when the first stock of trees will be sold out.



WEST HIGHLAND CATTLE.

It is by no means uncommon to hear some of our domestic animals spoken of as belonging to "*native breeds;*" and from the little consideration which is usually given to the subject, it is not improbable that some people have lost sight of the fact that all these animals, (including poultry, with the exception of turkeys,) were introduced into America from the Old World.

True, we have two indigenous species of the ox, the Buffalo or Bison, and the Musk Ox; and also a wild species of sheep, (the American argali, or Rocky Mountain Sheep,) but all these are specifically different from our domestic races.

Only about three centuries and a-half have elapsed since the first permanent settlement of this country was established by Europeans, and it is but little more than two centuries since our forefathers planted themselves on the territory which we occupy. It is obvious, therefore, that our horses, cattle, sheep, swine, &c., have been disseminated here within the period alluded to—the parent animals having been introduced at various times.

The numerous herds of cattle and horses which roam over the vast plains of South America, were derived from domestic stocks brought by the Spaniards from their native country, and turned loose to subsist and propagate their species, in a great degree uncontrolled by man. The small, half-wild ponies occasionally seen on our western prairies, and the ponies in the possession of our Indian tribes, are the descendants of animals derived from the French colonists in Canada, or from the Spanish settlements at the South.

In the English settlements, the cattle, as well as most of the other domestic animals, were brought chiefly from the British Islands. The inquiry has often been made—to what variety the common cattle of our country originally belonged? It is not easy to answer the question. There were probably importations of various stocks, though we have no authentic account or description of them. The heterogeneous character of our common cattle has led to the idea that the progenitors were not selected with much regard to purity of blood or similarity of points; but it must be admitted that they have generally been bred in so careless and indiscriminate a manner, that they would not be likely to make any approach towards a standard of uniformity. An exception should, perhaps, be made in reference to some parts of New England, where the original stock is believed to have been obtained chiefly from Devonshire and Sussex, and has assumed more nearly the appearance of a distinct breed than the general stock of the country.

It was not, however, till the middle of the last century that any systematic attempts were made to improve the breeds of British cattle; and as the importations of stock to this country for the purpose of effecting improvement, have been made since that period, it is comparatively easy to ascertain the varieties from which they were taken.

It may be proper to observe that the present breeds of British cattle are arranged in four general divisions: viz., Long-Horns, Middle-Horns, Polled Cattle and Short-Horns, exclusive of the Alderneys. These are subdivided into many varieties, each having its distinctive name. Thus, among the Middle-Horns we have the Devon, Hereford, Sussex, and several Scotch and Welsh breeds; among the Long-Horns we have the Bakewell, Lancashire and Irish; and among the Short-Horns, the Yorkshire, Durham, &c.

Within the last sixty years, we have had importations of several families of Short-Horns, and Long-Horns, together with Herefords, Devons, Ayrshires and Alderneys. These breeds, for the particular purposes and localities for which each is adapted, have succeeded well, and have been of great advantage. But considering the great extent of our country, and the great variety of climate and surface which it embraces, the inquiry is presented, whether there are not breeds which have never been introduced here, that would be better suited to some sections than any we have yet obtained? We allude particularly to those parts of the country in which animals are required to endure considerable exposure, and to obtain their subsistence from rough or sterile grounds. Our northern districts, including a large portion of New-England, New-York, and the Canadas, and all the mountain ranges from thence to Georgia. are of this character.

In reference to the question—what would be the best and most profitable cattle for these sections. we beg leave to call attention to the characteristics of the West Highland breed of Scotland, as described by various authors. It may be observed in the outset, that they belong to the primary division of Middle-Horns.

MARTIN, in his late work on the Ox, says:—"Turning to Scotland, it may be observed that from the remotest times, this land of heath and mountain has been the nursery of an original breed or race of black cattle, of wild aspect, of beautiful symmetry, and though small, yet vigorous and hardy; patient of hunger and cold, and rapidly fattening on tolerable land."

There are several varieties of cattle in Scotland, but those of the Hebrides or Western Islands, commonly called *Kyloes* or West Highlanders, are considered most pure. Mr. MARTIN speaks of this breed as follows:

"Change the color from black to white, and there is little difference between a beautiful Kyloe from Arran, Islay, or the Isle of Skye, and one of the wild cattle of Chillingham; if we may venture an opinion, they display more nearly than any other breed, the characters of the mountain cattle of our island when invaded by Cæsar. We say the mountain cattle, because we suspect that a larger and heavier race [the Long-Horns] even then tenanted the swampy plains and low grounds of many portions of the country."

He thus gives the points of these cattle:—"In a well bred Kyloe, the following characters are conspicuous: The head is small and short, with a fine and somewhat upturned muzzle; the forehead is broad; the horns wide apart at their base, tapering, and of a waxen yellow: the neck is fine at its junction with the head, arched above, and abruptly descending to the breast, which is broad, full and very prominent; the shoulders are deep and broad, and the chine is well filled, so as to leave no depression behind them; the limbs are short and muscular, with moderate bone; the back is straight and broad; the ribs boldly arched and brought well up to the hips; the chest deep and voluminous; the tail high set, and largely tufted at the tip; the coat of hair thick and black: such is the bull. The ox differs in proportion. The cow is far more slightly built, and her general contour is more elongated. Although, as we have said, black is the ordinary or standard coloe of the kyloe, many are of a reddish brown and so mr are of a pale or whitish dun."

The descriptions of this stock by Low, YOUATT, and others, are of a similar character, with the addition that their beef is stated to be of the finest quality, commanding the highest price in every market where it is known. Their milk, though not afforded in great abundance, is of extraordinary richness, and the butter and cheese from it is highly esteemed for its superior flavor. —PITT, in his "Survey of Leicestershire," states that the late Mr. BAKEWELL made a trial with three cows; a Yorkshire Short-horn, a Scot, and one of his own improved Long-horn, or Dishly breed. The result was that the Short-horn ate much the most food and gave the largest quantity of milk; the Scot made *most butter;* and the Dishly gave least milk, but increased most in weight.

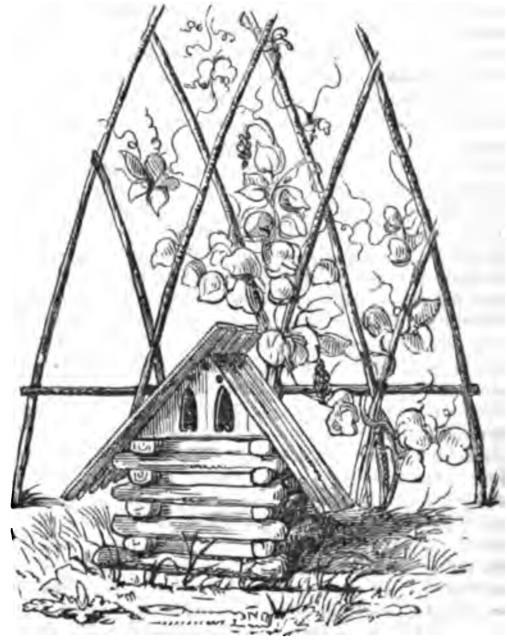
The late JOHN PRICE, Esq. of Poole House, Worcestershire, England, a distinguished breeder of Hereford cattle, stated in a communication to the *Farmer's Magazine*, (vol. iii, new series, pp. 49, 50,) that he deemed the West Highland Scots to approach more nearly than any other breed, the standard of form which he considered the true one, and he therefore decided in the outset on adopting them as his "model." He was still more induced to this course from a conviction that they "had remained longer than any other breed in the place where they were first located, and were more free from intermixture with others." For his soil, he wished an animal somewhat larger than the West Highlanders, and he chose the Herefords as coming nearest his model of any having the requisite size.

C. HILLIARD, in his "*Practical Farming and Grazing*," says—"The West Highlanders are as perfect in their form as any cattle upon the face of the earth."

The size of the Kyloes or West Highlanders varies somewhat, according to the locality. The nett weight of those from the Isle of Skye and Islay, is said to be from 500 to 800 pounds, the four quarters, at four to five years old. The Argyle variety is considerably heavier. Mr. MARTIN says—"In Argyleshire they are larger than in the Hebrides, and many of them are models of beauty—pictures of a noble, semi-wild race; descendants of the old mountain breed, which once roamed in the wilds of Caledonia, and came crushing the forests to meet the fierce hunter."

Now are not the qualities possessed by these Highland cattle, precisely such as would adapt them to those parts of our country of which we have spoken? We think so, and are confident in the opinion that the introduction of this breed, and their relatives, the Galloways, would be a decided acquisition. We would, therefore, recommend the subject to the attention of our able agricultural societies, wealthy land-holders and other enterprising and public-spirited individuals, through whose influence and exertions we hope to see the stock introduced and submitted to a fair trial.

The figure at the head of this article is that of a West Highland bull, bred by Mr. GRANT, of Banffshire, Scotland, which received the highest prize in his class, at the show of the Highland Agricultural Society, in 1840.



Rustic Hencoop.

The above is a sketch of a rustic hencoop and trellis, taken from one in Mr. Arden's garden in Putnam county. It is very simple and easily constructed. The Hen coop is a log cabin on a small scale, with the eaves of the roof projecting, and the door immediately under the eaves. The trellace is to be made of cedar poles with the bark left on and crossed as in the drawing. Plant a vine to partially cover it, and it will be found very ornamental. Trellis 10 feet high. A SUBSCRIBER.

THE FARMER'S NOTE BOOK.

Scotch and American Plows.

In the *Cultivator* for April, page 108, your correspondent, W. of Lenox, Mass., delineated both the Scotch and American plows, and attempted to show the superiority of the former over the best specimens of the latter, and he arrives at the conclusion, that wherever first rate plowing or thorough tillage is required, "the Scottish plow or some analogous instrument must be used." But I am not quite prepared to see so much skill and labor as has been expended on the American plow, consigned so suddenly to oblivion, believing as I do that our *best* plows are not excelled by any other whatever. Before we can determine what constitutes a good plow, we must know what work the plow is to perform—the dimensions the furrow-slice should possess. And here it may be well to remark, that the same plow may be so adjusted, as to plow deep or shallow and make work equally good, but cannot be made to turn furrows of *widths* materially different and do each in the same perfection. And when we see contrivances for turning the plow to the right or left, it reminds one of an almanac published not long since, and calculated for a certain meridian, but would "answer for all places adjoining."

Every plowman knows, that a plow will do the best work in turning a furrow about as wide as the extremity of the wing of the share. The question now arises, what width of furrow is it most profitable to plow at present in this country?[*]

We are in the habit of frequently referring to the European modes of farming, and some are ready to adopt many of the practices of that country, without considering whether they are adapted to our circumstances. Owing to the difference in the prices of land and labor, a system of farming that is profitable in one country would be ruinous in the other. Thus spade husbandry in some parts of Europe is extensively practiced, but for reasons already stated, would not answer here. On the same principle, the furrow slice may be so narrow that the extra product, if any, would not pay for the extra amount of labor expended. Some writers in this country have recommended that the furrow-slice be not more than six inches wide, but in practice it is believed that not one farmer in a hundred plows less than 9 or 10 inches wide, and in light soils, some still wider. And it is inferred that ten inches is the width that "W." plows, for he says, speaking of his Scotch plow with a wing six inches wide, that it does not cut the furrow much more than half off on the under side." This being the case, it is no wonder that his "plowman received no premium," for however fair the work might appear on the surface, it is probable the committee examined the under side of the furrow as well as the upper, and could not conscientiously award a premium where so much imperfection was found. But let us for a moment examine the merits of the Scotch Plow, when moving in its appropriate sphere, that is, when turning a furrow only six or seven inches wide. W. says, "its long and twisted mould board raises the slice, pulverises it completely, and leaves it in i.s place with absolute regularity;" and quoting Colman he says, the "work when done resembles a ruffle just come from a crimping iron." That the work of the Scotch plow when guided by an experienced plowman, appears quite uniform, is not denied. But because a furrow resembles a ruffle just come from a crimping iron, or a brick just come from the mould, does that prove that it is finely pulverized? Certainly not; on the contrary such appearance would indicate that it had not been broken at all.

Let it not be said that I would advocate a retrograde movement, that I would have a furrow less perfect, but the perfection to be preferred is not the perfection of appearance merely, but that of utility. The furrow should be drawn in a straight line, should be of uniform width and thickness, but when inverted, the surface should be somewhat convex, and be full of crevices, some of them perhaps, half an inch in width; this would indicate that it had been finely pulverised. And this is precisely the situation in which some of our best American plows leave it, and when left in this way, the land remains light and lively a much longer time than it otherwise would.

It is admitted that in very strong ground, the Scotch plow, on account of its great weight, is less liable to be thrown out than the American, but there are comparatively but few sections of country where it will be necessary to use them on that account. Do not those figures on the page referred to, need to be explained? They were made it is said, "in order to give at a glance, the comparative proportions and size of each kind of plow."

It will be seen that the distance, as there represented, from the point of the share up to the under side of the beam, in the Scotch plow, is about double to that of the American. By measurement, I find the distance in the American plow that I use, to be fifteen inches, and I have never seen a Scotch plow, (and I have seen several,) in which the distance was 30 inches. Besides, there is usually in the Scotch plow, a draught-rod[*] some 3 or 4 inches below the beam, which has the same tendency to cause the plow to clog, as if the beam itself were in that place. W. says, truly, that the wing of the share is usually 10 inches wide in the American plow, and not over 6 inches in the iron one. But in the figures there given of the underside of each, the wing of the Scotch plow is ¼ of an inch in width, and of the American ⅝. By what rule in arithmetic he can make this the same proportion as six to ten, I confess I am not able to discover.[†] Your correspondent thinks, that in order to move the Scotch plow, our farmers must procure much more powerful animals than they at present employ. It is quite probable that some who use the American plow, have as good teams as those who use the other kind,—but they may not care to tax them to the full extent of their ability in the daily operations of the farm, and this, where considerable plowing is to be done, is an important consideration.

It is not surprising that among the almost endless variety of American plows, there should be some comparatively worthless; but there exists no necessity for so many kinds, for a plow that will turn a furrow of given dimensions with the greatest ease to the team in one kind of soil, is usually best to turn a furrow *of the same dimensions* in other kinds. H. C. B. *New-Lisbon, N. Y.*, 1848.

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[*] This question seems to imply that some special width of furrow would be proper for "this country." We do not think the case admits of any specific rule. The width of furrow should be varied with the nature of the soil and the purpose to be accomplished. On some soils, already too light, it might be expedient to make furrows twelve to fourteen inches wide; while to render others of a compact nature, sufficiently open and pliable, it would be best to plow not more than half that width.—Eds.

[*] Scotch plows are sometimes used with draft-rods, but in those we have seen, the rod is by no means "usual."—Eds.

[†] The figures given by our correspondent W., we do not understand to have been drawn with mathematical accuracy, or to correspond *precisely* to the relative proportions of the plows represented; but were designed to give a general idea of their form.—Eds.

Good Butter.

The articles recently published in the Cultivator, on the subject of butter for the United States navy, are attracting the attention they deserve, and leading to inquiries and investigations which will result in eliciting truth and correcting erroneous opinions. The Secretary of the New-York State Agricultural Society is entitled to high commendation for the interest he has manifested in acquiring important information, and publishing it for the benefit of community.

The prejudice against butter, which is not marked "Goshen" or "Orange County," is passing away, and the dairymen of Chenango, Delaware and other counties have obtained a high reputation for the quality of their butter.

A Chenango farmer is now a contractor with the government for the delivery of ten thousand pounds of butter annually for the use of the navy. Last October he delivered the whole quantity—the produce of his own farm—at the navy yard in Brooklyn, in firkins of eighty pounds each. It passed the usual *rigid inspection*, and not one firkin was condemned. This instance is mentioned in confirmation of your remark, in the July number of the Cultivator, that other counties besides Orange produce excellent butter. I have another object in mentioning it, which is to stimulate our farmers by this example to exertion, and to the application of the requisite skill and attention to the manufacture of butter. The hills of Chenango afford the finest pasturage, and the purest spring water in abundance. Without these, good butter cannot be made. With them, no poor butter should be made. The rules to be observed in the manufacture are few and easily understood. The necessity—the absolute necessity of adhering to them, cannot be too strongly enforced.

Oxford, N. Y., July, 1848. A. B.

Crops in Illinois and Wisconsin.

A correspondent who signs "A. E.," and dates at Cicero, N. Y., gives us a sketch of some of his observations during a trip through a portion of Illinois, Wisconsin and Michigan. He says:—"From Chicago I went a few hundred miles through the States of Illinois and Wisconsin, mostly by private conveyance, which gave me a fair opportunity of viewing the country; the grain crops here, as in Michigan, were very heavy on the ground, and bid fair to yield an abundant harvest. There is more spring wheat on the ground in Northern Illinois than there is winter wheat; it is considered a much surer crop, and nearly equal in quality. They have recently obtained a new kind of spring wheat called the Hedge-row, which so far answers an excellent purpose. It has a very short head, is hardy and free from all kinds of insects; it gives a good yield and sells for five or six cents only, less on a bushel than winter wheat. The potatoes in Illinois have been injured to some extent by the disease so prevalent in this section, but in north Wisconsin they have as fine potatoes as ever grew. They supply Buffalo and Rochester to a great extent.

The soil of the great prairies in Illinois, is a deep black muck, easy to work and very productive. I saw here in one or two young orchards the locust borer working in the apple-trees—in appearance, the same kind precisely that has destroyed so many locust trees in this section. The people much fear that their young orchards will be ruined. Do you know of any preventive?

Gravel Buildings.—I saw in Wisconsin, some (to me) new constructed buildings, called *Gravel houses*. They take coarse gravel and coarse sand; and they put one bushel of their common lime to 8 or 10 bushels of sand; they take boards about a foot wide, set them on the edge, 10 or 12 inches apart, and fill them up with the gravel and mortar about a foot; then let it dry a day, and so keep on till they get to the height they wish. It makes a good substantial building. At Beloit they have many buildings of this kind, and at Southport they have a large church built in this manner. It is as cheap as any other good mode of building."

Advantages of Forests.

The Hon. Geo. P. Marsh, in his address before the Rutland County Agricultural Society, makes the following excellent observations in regard to the advantages of forests:—

"The functions of the forest, besides supplying timber and fuel, are very various. The conducting powers of trees render them highly useful in restoring the disturbed equilibrium of the electric fluid; they are of great value in sheltering and protecting more tender vegetables against the destructive effects of bleak and parching winds, and the annual deposit of the foliage of deciduous trees, and the decomposition of their decaying trunks, form an accumulation of vegetable mould, which gives the greatest fertility to the often originally barren soils on which they grow, and enriches lower grounds by the wash from rains and the melting snows.

"The inconveniences resulting from a want of foresight in the economy of the forest, are already severely felt in many parts of New-England, and even in some of the older towns in Vermont. Steep side hills and rocky ledges are well suited to the permanent growth of wood, but when in the rage for improvement they are improvidently stripped of this protection, the action of sun and wind and rain soon deprives them of their thin coating of vegetable mould, and this, when exhausted, cannot be restored by ordinary husbandry. They remain, therefore, barren and unsightly blots, producing neither grain nor grass, and yielding no crop but a harvest of noxious weeds, to infest with their scattered seeds the richer arable grounds below. But this is by no means the only evil resulting from the injudicious destruction of the woods. Forests serve as reservoirs and equalizers of humidity. In wet seasons, the decayed leaves and spongy soil of wood lands retain a large proportion of the falling rains, and give back the moisture in time of drouth, by evaporation or through the medium of springs. They thus both check the sudden flow of water from the surface into the streams and low grounds, and prevent the drouths of summer from parching our pastures and drying up the rivulets which water them. On the other hand, where too large a proportion of the surface is bared of wood, the action of the summer sun and wind scorches the hills which are no longer shaded or sheltered by trees, the springs and rivulets that found their supply in the bibulous soil of the forest disappear, and the farmer is obliged to surrender his meadows to his cattle, which can no longer find food in his pastures, and sometimes even to drive them miles for water. Again, the vernal and autumnal rains, and the melting snows of winter, no longer intercepted and absorbed by the leaves or the open soil of the woods, but falling everywhere upon a comparatively hard and even surface, flow swiftly over the smooth ground, washing away the vegetable mould as they seek their natural outlets, fill every ravine with a torrent, and convert every river into an ocean. The suddenness and violence of our freshets increases in proportion as the soil is cleared; bridges are washed away, meadows swept of their crops and fences, and covered with barren sand, or themselves abraded by the fury of the current, and there is reason to fear that the valleys of many of our streams will soon be converted from smiling meadows into broad wastes of shingle and gravel and pebbles, deserts in summer, and seas in autumn and spring."

The Law of Manures.

We notice that the question—"*Do Manures Ascend or Descend?*" has lately been considerably discussed. For our own part, we should no more think of asking or discussing such a question, than we should whether *moisture* ascends or descends? It obviously does both; and so it is with manures, unless the term manures is to be restricted to *mineral* substances only.

But though we believe that the valuable parts of manures may be both carried into the air and washed into the earth, we do not admit the propriety of some positions, by which the fact is attempted to be illustrated. For instance, it is said—"the *gases* of manure ascend, but the *salts* descend." The fact is here lost sight of, that the same substances are capable, under different circumstances, of assuming both a gaseous and solid form. Such is the case with carbon,—which constitutes the greatest part of ordinary manures, as well as vegetable substances; and also with nitrogen,—which has formerly been held by chemists, (and is, indeed, still held by many chemists,) as the most valuable and important element in manures.

If a heap of manure is left to ferment on the surface of the earth, or without being covered by some absorbing substance, its bulk and weight are greatly reduced. What has become of the lost portion? It has, of course, gone into the air, as it would have done if the manure had been acted on by fire. The manure, or a certain portion of it, has been resolved into its original elements, and the carbon and nitrogen it contained have again become parts of the atmosphere.

The nitrogen in manure is in the form of ammonia, and that it escapes during fermentation, has been proved; it is perceptible by the smell, and has, also, by means of acids, been detected in its ascent. Most people are familiar with ammonia in the form of a salt, and know that in this form it is extremely volatile, and readily passes into an aeriform state. It is also easily soluble in water; and is, therefore, readily washed into the earth by rains. Thus the very substance which forms a salt, may become a gas and ascend into the air; or it may become a liquid and descend into the earth.

Manures may be combined with substances which will prevent the escape of ammonia; such as charcoal, or charcoal-dust from coal-pits, peat, muck, soil, and vegetable or carbonaceous substances generally. If the process of fermentation is properly regulated, and the manure is combined with articles which will absorb the gases as they are disengaged, there will be no waste. It may be considered a rule, that whenever smell is emitted by manures, some of their valuable properties are being dissipated; hence their odors should not be wasted "on the desert air;" they should be saved and converted into vegetable substances, in which condition they are not only more agreeable to the *olfactories*, but become substantial elements of animal nutrition.

As to the *sinking* of manures, there is positive evidence of the fact. We have in many instances seen its effects to the depth of several feet. On the farm of Mr. Prentice, near this city, it was lately noticed, in digging a cellar near where a compost heap had laid, that the earth, to the depth of three feet from the surface, though it was of quite a compact and clayey nature, was so impregnated with the qualities of the manure that they were plainly perceptible. And the effects of manure are always traceable to a greater or less depth, in proportion to the porousness of the soil and the quantity of manure applied. It is Liebig's opinion that the soluble parts of manures, "phosphates, and other salts with alkaline bases," are drawn off, and wasted to a great extent by percolation.*

The depth to which manures should be buried is another subject, which, in connexion with the question, whether they rise or fall, has been much discussed; and some, who believe that manures *always* ascend, have arrived at the conclusion that they should be placed from "a foot to eighteen inches" under ground.

We do not suppose it is practicable to lay down any fixed rule in regard to the covering of manures. Some general principles, however, may form a guide. It is evident that manures can only afford nutriment to plants when they are in a soluble condition. In their application, therefore, the causes which produce solution and decomposition should be regarded. These causes are, principally, heat, air and moisture; though in the elimination and assimilation of food by plants, light and electricity are evidently powerful agents. Most of these principles act with the greatest force *near the surface*.

In some cases, as in dressing grass-lands, we would spread manures on the top of the ground. But in such cases, we would use a well-rotted compost, in which the animal manures had been combined with such substances as would absorb the matters that during fermentation might pass off. The reason why we would prefer, for such a purpose, manure that had passed through the first stages of decomposition in the manner mentioned, is, that it would be more readily soluble, than in a fresher state, and would be immediately available to the crop; while at the same time its fertilizing principles would be so far combined and fixed, as not to be liable to waste.

But the practice of leaving manures *entirely* on the surface, is not, in many cases, the most judicious, for the following reasons: 1. If it is applied in an unfermented state, uncombined with absorbent substances, some of its valuable properties might be lost during decomposition. 2. With hoed crops, fresh or fibrous manures, on the surface of the ground, would be an obstacle, (more or less according to the quantity,) to cultivation. 3. Manures of any kind, or in any state, when left on the surface, might, from being kept too dry, fail to benefit the crop for which they were intended. Let it be recollected that they are only available to plants when in a soluble state; and to be made soluble, they must be kept moist. We would therefore cover manures to such a degree as would secure the advantages and avoid the objections here indicated, and no more.

On tenaceous soils, a *mechanical* effect is sought to be produced by manures; that is, a greater friability of the soil. This purpose is best accomplished by plowing in strawy or fibrous manures in a fresh or unfermented state. This is obviously, however, quite a different thing from the application of manures to *feed a crop*.

Exhibition of the Royal Agricultural Society.

The exhibition of this society, for the present year, was held at York. It commenced on the 11th and closed on the 14th of July. The English papers speak of it as being "the greatest of the ten meetings" which the Society has held. The number of entries for animals was 725, and for implements 1508. The total amount bestowed in prizes was £2,295—($11,475,) of which £245—($1,225) was for implements. The number of animals and implements exhibited was much larger than on any former occasion. On account of the reputation of the district for horses, and for short-horned cattle, it was expected that these would be not only numerous, but of better quality than usual. The *Mark Lane Express* says, however, "in respect to the short-horns, we think we speak the general opinion when we say, they did not come up to the expectations which had been generally formed." The successful competitors for short-horns were, Mr. Keevill of Wiltshire, first, and Mr. Banneman of Lancashire, second premium for bulls, in class 1; Mr. Linton of Yorkshire, and Mr. Crisp of Northumberland, for bulls in class II; for short-horn cows, Mr. J. M. Hopper and Mr. R. Booth, Yorkshire, took the prizes; and for heifers the prizes were taken by Messrs. Booth, Stanhope, Smith and Kirkham. For Herefords, the prize-takers were Messrs. Carpenter, Higgins, Monkhouse, Williams and Aston, for bulls; and for cows and heifers, Messrs. Williams, Aston, Walker and W. F. Hobbs. For Devons, the prize-takers were Messrs. Hole, Fouracre, Turner and Pelham for bulls: and for cows and heifers, Messrs. Bond, Fouracre, Turner and Hole. A list of "local prizes was awarded, which were confined to residents of Yorkshire; but the competitors were also allowed to show for any of the "general prizes." In the "local list," the first premium for short-horn bulls was given to Mr. Ambler, and the second to Mr. Thomas Bates. The other premiums on short-horned bulls in this list, were given to Messrs. Linton and Thompson. The local prizes for short-horn cows and heifers, were given to Mr. R. Booth.

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* See Liebig's essay on "Artificial Manures." Cultivator for 1845, page 364.

The Dinner.—A prominent feature of most English assemblages is the dinner. It is here that, on occasions like the one to which we allude, the awards of prizes are declared, speeches are made, and the general objects of the association are discussed. At this meeting about *twelve hundred* persons sat down at one time under a pavillion 140 feet long by 84 wide. Among the company were the most distinguished and influential of the English nobility, with his Royal Highness Prince Albert, and several foreign ministers, among whom was our respected and able representative, Mr. Bancroft, who was honored by a prominent position, and invited by the president to offer a toast, which was given, accompanied by a beautiful and highly-commended speech. We have not room for the whole of this eloquent speech, but cannot forego the inclination to submit the following extract:

"I rejoice," said Mr. Bancroft, "that we live in an age when, of all the trees that are planted in the ground, the husbandman of all lands invokes the choicest blessing of Providence on the tree of peace (cheers;) praying that its root may strike to the very centre of the earth, and that it may be firmly rooted, that its boughs may but rustle in the breeze of the stormiest revolutions (loud and reiterated cheers). It is with this sentiment and this feeling I stand before you to day. The kindness of your president has favored me with a toast; but I do not, in putting myself forward as diplomatist, speak as a privileged spy (laughter.) I can only say that any one who comes, from any quarter of the world, to spy out the nakedness of the land of England, will have to go home again for his pains. He will find nothing but a united people—(loud cheers)—he will see nothing but a nation that loves English liberties, and is determined to maintain and advance them under the influence of judgment and reason, as conducing to the general prospects and public weal (loud cheers.) He will see nothing but society in the finest arch in which the keenest eye can detect no crevice. And I, gentlemen, speaking as an American—I, gentlemen, speaking as a representative of my country tell you that we rejoice in your prosperity (cheers). I should be denounced by my country if I did not utter that sentiment (loud cheers). I tell you that the greatest delight I have had in this my happy visit to this far-famed valley—this wide, rich, vastly extended valley, which has not its rival till you pass the Alps and come upon the valley of Normandy; I tell you the greatest pleasure I have had in this visit is to see that everywhere fruits of your industry are likely to be rewarded—to see everywhere your teeming valleys promise you a redeeming harvest, before which the sorrows of the past year, which I too witnessed, will pass away like the shadow of a summer's cloud (loud and long continued cheering)."

Prince Albert and several noblemen made very sensible and excellent speeches, which are reported in full in the English papers. There were several meetings for the discussion of practical subjects, held during the show, of which we shall give some notice in another place.

Weights of Swine.

I send you the following account of the weights of sixty-two pigs and forty-five grown hogs raised and slaughtered by Mr. Anthony Woodward, of Cream-Ridge, Monmouth county, New-Jersey. Mr. Woodward is a young man, but an intelligent and most successful farmer. His farm consists of about 180 acres, of which he had 34 acres in corn, 34 acres in rye and wheat (principally rye) and 2 acres in potatoes; the remainder being in grass. In addition to the large number of hogs always raised by Mr. W., he usually keeps over one hundred breeding ewes and a considerable number of cows.

The pigs were eight months and two weeks old when slaughtered, and weighed from 112 to 257—averaging 166 pounds each. The grown hogs were 20 months old, and weighed from 220 to 430—averaging 317 lbs. each.

Is not the little state of New-Jersey ahead?

The amount of grain left after fattening the above crop of pork was as follows: of corn 200 bushels; of wheat 90 bushels; of rye 100 bushels; besides 275 bushels of potatoes.

For the correctness of the above statements I pledge myself; the weights having been taken down by my son, from whose memorandum I copied them. W. B. H. *Long Green, Md., July* 8, 1848.

Preservation of Shingles.

In your paper for July, the question is asked, "how can spruce shingles be rendered durable for roofs?"

Immerse them for 48 hours in a weak solution of corrosive sublimate, (Bi-chloride of mercury,)—and they will last longer than any shingles not so prepared, of even the best kinds of wood.

This process is called *Kyanising* after the inventor, John Kyan. Most of the timbers used at the Woolwich Dock Yard, were so prepared 25 years ago, and do not as yet show the slightest decay.

The sleepers used in the Amboy railroad, were Kyanised with a similar result. Its operation is to coagulate the sap, and thus render it insoluble, and consequently imperishable.

The cistern in which the process is conducted, should be guarded from the approach of cattle, as the solution is very poisonous. Jas. J. Mapes. *Newark, N. J., July* 6, 1848.

Lands in Maryland.

There is a vast amount of land here in Baltimore county, which has been exhausted by the culture of tobacco very many years since, and which has been lying out for half a century—a great deal of which may be purchased very cheaply. No land, perhaps, in the world answers so well and so promptly to a little manure as this. I have seen an old field, which was nearly bare of herbage, enclosed and dressed with about two hundred pounds of guano, produce a good crop of wheat. I have such an one this season in oats, upon which I sowed, at the time of sowing my oats, 100 pounds Peruvian guano per acre, and better oats are not often to be seen. You have many enterprising young *married men* who might purchase a farm here, perhaps, who would have to toil at home for many years to do so. They can purchase land at very low prices, and by paying a small part of the purchase money, in many instances get long credit for the balance. There is very little of this land which is not very easily improved, especially the isinglass [micaceous?] soil. Yours, &c., W. B. Hamilton.

Long Green, Md., July 8, 1848.

Farming in Wisconsin.

A correspondent sends us the following notice of the farm of Dr. Richard M. Meigs, formerly a resident of this city, but now of Waterville, Waukesha county, Wisconsin. "Dr. M.'s farm contains 349¾ acres, of which 60 acres are now in wheat, 8 in oats, 4 in corn, 2 in ruta bagas, 6 in rye, 8 in barley, together with a large garden. Sixty acres have been broken this summer for fall wheat. On purchasing, the land already broken up had been cropped with wheat for six years in succession, and so reduced as to yield scarcely the seed. Dr. M. is known by Albanians as a practical horticulturist, and especially devoted to the raising of the grape—taking premiums for several years at the Albany Co. Hort. Society. He has a few vines from the nursery of John Gott; 190 peach trees from the same gentleman, planted from the pit a year ago last fall, which are now four feet high. Locust trees from Wm. N. Strong, taken from Kane's Walk, in Pearl st., Albany. His orchard, comprising varieties of apples, looks well. The coming year, he will pay more attention to spring crops, and prepare 60 or 80 acres for fall wheat, in addition to what is already under the plow. Wheat is in fine order, and is now being harvested. Barley has been cut. Every kind of spring crops never looked better. His barley and oats have been estimated to exceed 60 bushels to the acre, and by some to attain 70 bushels—all from old land." *July* 18, 1848.

Use of Cotton Cloth in Curing Hay.

[We have been favored by A. A. Lawrence, Esq. with the following letter from Col. Pierce, of Greenland, N. H., one of the largest and most successful farmers in New England. It affords some valuable information. We have formerly known cloth caps for hay used with advantage.—Eds.]

A. A. Lawrence, Esq.—Dear Sir,—I take pleasure in replying to your inquiries about the "Hay Caps" made from your Salmon Falls Sheetings.* They have fully answered my expectations, preserving the hay perfectly, both through long rains and heavy showers; not only saving a great deal of labor in shaking the rain out of the hay, but preserving all its good qualities, especially that agreeable aromatic perfume, which is always lost when much wet.

I am indebted for the hint of this valuable improvement in haymaking, to a piece published in the *Boston Cultivator*, June 5, 1847, extracted from the *Maine Farmer*. Those there described were made of cloth thirty inches wide and were five feet square, which are too small. Those which I have made of your yard-wide sheetings, two yards square, are as near right as can be. The two breadths are sewed together with a stout hem at the ends, the corners turned back about two inches and sewed down strong, leaving a loop through which is run a stout string of the kind called marline, the ends tied so as to make a loop of an inch and a-half in diameter; through each of these is run a stick of eighteen or twenty inches in length into the hay, standing it up to prevent the loops from slipping off; the haycocks should be made higher than usual and the cloth drawn tight.

The cost is about thirty cents each, namely four yds. of sheeting at seven cents and two cents for line and thread; the making, if done at leisure hours in a family, will cost little or nothing.

Upon the whole, with the experience I have had of their usefulness, I would not be without them if the cost was double what it has been. Yours truly, J. W. Pierce. *Greenland, N. H., August* 3, 1848.

P. S.—I have waited several days to see the result of the last trial of the caps which we put on last Saturday afternoon—the weather at the time being very fine and promising well. We had about 350 cocks in the field; about 100 were not covered; on Monday it rained all day, the next day, the hay that was not covered was opened, dried, and got in at night; that under the caps was left, being safe, to be got in at leisure; which was done the next day with as little labor as that of the day before, though nearly three times the quantity, and in much finer condition—indeed the rain had no effect upon it.

The 30 inch drillings would not answer a good purpose, and I am not certain, if I were going to have more of them, but that I should prefer cloth still wider than your sheetings, but I am perfectly satisfied with what I have.

I have saved my hay three times already, and those which are washed free from starch, answer equally well as when first used.

Management of Hens.

I want information in regard to the best mode of making hens lay eggs. I have about four hundred hens in my yard, and they do not lay as well as they ought. I want instruction as to how the yard should be fixed, and how they ought to be kept, and how to pack eggs to keep them from spoiling. If I can adopt some plan to make the hens lay well, I intend to buy a thousand or two thousand chickens this fall, and buy many eggs the coming spring. You now understand my business, and see the subject upon which I want information. A. J. Mears. *Hubbard, Ohio, July*, 1848.

We shall be glad to receive the suggestions of any of our experienced correspondents in relation to the above subject. Eds.

Loss in Burning Bones.

I would be glad to know what is the amount of loss in calcining bones. If I am not mistaken, Liebig says none of much consequence to the farmer. Johnston, in his Agricultural Chemistry supposes the loss very great, and in Allen's American Agriculture, burning bones is called a *very wasteful practice*.

If bones from which the oil has not been extracted are thrown into a heap, they readily burn, so that many fall into powder and the rest are easily crushed. If in this process, they really lose nothing very valuable as manure, or if they do not lose more than twenty-five per cent, it would be by far the most economical mode for all farmers, who can collect bones at the ordinary prices given at the bone mills. As regards myself, this may be easily shown—

Cost of bone-dust in Baltimore, ……	50	cts. pr. bush.
Bags, freight and drayage to York, ..	10	" "
	60	

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* The sheetings weigh 2¾ yards to a pound.

Cost of collecting bones, per ton, $7, which will make, when crushed, about 35 bushels, or 20 cts. per bushel; cost of burning and crushing 5 cts. per bushel: 25 cts. per bushel, or rather for what would have been a bushel of crushed without burning, for the bulk is very much reduced in burning, but if the value remains, mere loss of bulk is an advantage.

I have a machine for pounding bones by hand, upon which two hands will pound to the usual fineness, eight bushels a day in dry weather, taking the bones just as collected, boiled and unboiled. This makes them cost about thirty-seven cents a bushel. The price will do, but it is very slow and troublesome compared with burning. If the simple question, *what amount of loss* do bones sustain for agricultural purposes by burning them until they *fall to powder?* could be answered through the columns of the *Cultivator*, I doubt not many would be benefited, and myself among the number. Edward Jessop.

[We would refer our correspondent to the remarks of Prof. Johnston, in the article on the use of bones as manure, in this number. Eds.]

The State Fair at Buffalo.

The Secretary of the Society will be in attendance at the rooms of the officers at the Mansion House, where all applications will be attended to up to the fourth of September. The officers will meet at the rooms mentioned each evening during the fair, where they will be happy to see any of their agricultural friends.

On Monday, the fourth of September, the business office at the show-grounds will be opened, where entries are to be made, and members will receive their badges.

The executive committee will meet Tuesday morning, September 5th, at ten o'clock, in the great tent, on the show-grounds, for the purpose of filling vacancies in adjudging committees. Members of committees are desired to be present on the morning of the 5th, and report themselves to the Secretary.

The chamber of the Common Council, Buffalo, a large and spacious room, has been secured for the Pomological Convention, which will meet on Friday the first of September, and continue during the Fair.

For the evening meetings during the Fair, the Lecture room of the Young Men's Association, and the Court-house, have been engaged; and other places will be designated, if necessary. Professor J. P. Norton of Yale College, will deliver an address at one of the evening meetings; and on another evening, Prof. A. H. Stevens, M. D., of New-York, will speak on the subject of the claims of Agriculture on the Treasury of the State. Dr. D. Lee of Rochester, and Rev. J. O. Choules, of New-Bedford, will also give addresses during the meeting of the Society. Several other gentlemen may be expected to speak.

The Railroad Companies will issue tickets to go and return at half the usual fare. They can be obtained at the offices of all the companies, and may probably be had as early as Saturday preceding the Fair. Stock and articles will be carried free, and will be taken at *any time*, on notice to the several companies, so that cars may be ready. Application in relation to transportation by railroad may be made to the following persons:—E. Foster, Jr., Albany; L. R. Sargeant, Troy; G. W. Young, Schenectady; T. M. Francis, Utica; J. B. Burnet, Syracuse; J. M. Sherwood, Auburn; E. J. Burrall, Geneva; Jos. Alleyn, Rochester; E. C. Dibble, Batavia; T. C. Peters, Buffalo.

The various public and boarding houses in Buffalo, have agreed to charge customers, during the Fair, the customary rates only.

American Institute.

The agricultural and horticultural departments of the exhibition of this association for the present year, will be opened on Tuesday, October 3d, at Castle Garden, New-York. Vegetables, fruits and flowers designed for exhibition, must be brought to the rooms and arranged the day previous—(Oct. 2.)

Plowing and spading matches will take place on Thursday, the 5th of October, at White Plains, Westchester county.

The central convention of Fruit-Growers, called by a notice from the committees of the Massachusetts and the Pennsylvania Horticultural Societies, and the committee of Agriculture of the American Institute, will meet at Judson's Hotel, No. 61 Broadway, New-York, on Tuesday the 10th of October, at 10 o'clock, A. M. The objects of the convention are to compare fruits from various localities; to determine synonymes by which the same fruit is known; to compare opinions respecting the value of varieties of fruit now in cultivation; and to elicit and disseminate pomological information. Persons are requested to bring with them to the meeting, different kinds of fruits, carefully packed and labelled, accompanied with memoranda in regard to the soil in which they grew, and facts in regard to their culture.

The cattle show will take place on Wednesday and Thursday, the 11th and 12th of October, at the Washington Drove Yard, on Forty-fourth street, between Fourth and Fifth Avenue. All entries under this head must be made, and pedigrees delivered, on or before Monday Oct. 9th. They may be sent to T. B. Wakeman, Esq., Secretary of the Institute, New-York.

Value of the Potato.

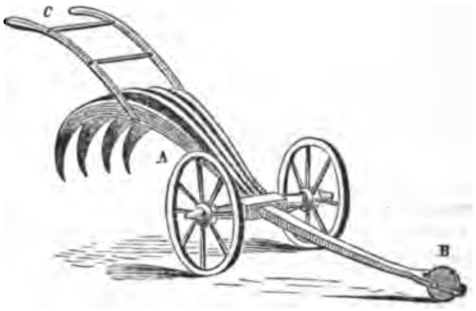
Prof. C. U. Shepard, in his address before the agricultural societies of Hampden and Hampshire counties Mass., made the following excellent remarks in regard to the potato:

"The potato is a vegetable which the rich man knows not how to forego; and one which places the poor man above want. With a shelter from the weather, and one or two acres of ground to plant with this tuber, man may subsist at almost any distance from the miller, the baker, the butcher, and, I may almost add, the doctor. It suits all tastes, flourishes in nearly all climates, and is eminently nutritious and healthful. Its cultivation demands but little labor, and when the earth has ripened the tubers, they are harvested without trouble, and cooked without expense. A few faggots in summer will boil them, and in winter the necessary heat is suppled without expense. There is no waste of time in the processes of milling, sifting, kneading, baking, seasoning, jointing or carving. There is nothing deficient nor superfluous in a well boiled potato. As soon as it is cooked, it opens by chinks, lets fall its thin pellicle upon the platter, and with a little salt, butter or milk, is ready for the unfastidious appetite of the hungry man. Start not back with surprise at the idea of subsisting upon the potato alone, ye who think it necessary to load your tables with all the dainty viands of the market, with fish, flesh and fowl, seasoned with oils and spices, and eaten perhaps with wines,—start not back, I say, with feigned disgust, until you are able to display in your own pampered persons, a firmer muscle, a more beau ideal outline, and a healthier red than the potato-fed peasantry of Ireland and Scotland once showed you, as you passed their cabin doors! No; the chemical physiologist will tell you, that the well-ripened potato, when properly cooked, contains every element that man requires for nutrition; and in the best proportions in which they are found in any plant whatever. There is the abounding supply of starch, for enabling him to maintain the process of breathing, and for generating the necessary warmth of body; there is the nitrogen for contributing to the growth and renovation of organs; the lime and the phosphorus for the bones; and all the salts which a healthy circulation demands. In fine, the potato may well be called the universal plant; and the disease under which it now labors, is an universal calamity. If any agricultural institution should ever be so fortunate as to make us acquainted with the means of controlling it, its name would quickly rank by the side of the proudest universities, and if the great discovery should proceed from a single individual, his name would live when those of the greatest generals and conquerors have become as uncouth and strange to human utterance as their deeds were unfriendly and opposed to human happiness."

Principles of Breeding.

At the late meeting of the Royal Agricultural Society, lectures were given by persons previously appointed, on various subjects connected with agriculture. Discussions of similar subjects were likewise held, at times when the members of the Society were not otherwise engaged. We think the feature a good one, and shall be glad to see it adopted by societies in this country. On the occasion above referred to, Prof. J. F. W. **Johnston** delivered a lecture on the applications of science to agriculture. Another lecture was given by Professor **Simmonds**, of the Royal Veterinary College—the general subject, the parturition of cows and sheep; but in his preliminary remarks, he made some valuable observations on the principles of breeding, of which we give the following, from the *Marklane Express:*

"Breeding with a view to improvement, might be said to be founded on nature's established law that like produced like. This was only true in part, for there was a constant tendency to change, arising from a variety of causes; such as domestication, living in a different climate, or on a different kind of food. The management to which animals were subject, had its influence. While those might be looked upon as the chief causes in operation to produce this constant change, at the same time they were means (added to others) which were used to effect an improvement. In order to improve the breed there were two plans, advocated by two sections of practical breeders. One was commonly called the 'in-and-in system,' the other the crossing plan. The in-and-in system originated from Mr. Bakewell, and it had at least the effect of destroying the prejudice which had existed against breeding from animals having a relationship. But the system had a tendency after a time to deteriorate the breed; in fact it might be said to be limited, so far as its benefits were concerned. Every improvement of breed required the application of the same means to retain it which produced it; the chief of these was care in the selection of stock, so as to avoid a tendency to hereditary disease. Crossing was founded on a principal just as secure as Bakewell's principle of care in selection, added to the in-and-in system Certain diseases were hereditary, and so was color, and they could only get rid of this color and this predisposition to disease by crossing. Still this crossing required care in selection. Mr. Simmonds illustrated this peculiar tendency to propagate disease or defects, by referring at some length, to the fact of the large proportion of horses in Yorkshire known as 'roarers.' Animals bred from these 'roarers' had a peculiar susceptibility to the disease, and if one of these Yorkshire horses was exposed to the ordinary causes of disease, the peculiar defect would be found developed, while other horses similarly exposed would escape. What was true with regard to horses is as true in regard to cattle, sheep, and all domesticated animals. The tendency of *like to produce like*, Mr. Simmonds illustrated, by referring to the results of crossing various breeds of cattle, such as Devons with Herefords, both the color and form of the parent animals being thereby altered or modified. In a state of nature the tendency to change was not observed to the same extent as in domesticated animals; therefore in a state of nature degeneration of a thing did not take place to the same extent as among the same breed when domesticated. The lecturer then passed on to remark upon the importance, in crossing animals, of suiting the male to the mind or taste of the female. Some might smile at this notion, but Mr. S. showed, by several facts, the importance of paying attention to this point."



Root Puller.

The above is a root puller as I would propose to construct one. The centre-wheels, A A are light and so placed that the puller balances on their axletree in such a way, that the heaviest part rests on the cast-iron roller B; the man who holds the handles, C, walks through the clearing as if he were plowing; and whenever he meets a shrub or bush which is to be removed, he presses on the handles and the points of the Puller enter the ground behind the roots, while the pulling of the team will lift the whole forepart of the implement up till the desired extraction is accomplished.

I think this an improvement on the common way of dragging the puller about wherever it might be wanted. **Alb. C. Richards.** *June* 29, 1848.

AUTUMN.

How dear to roam along the sunny hills,
When Autumn spreads her bounties on the plain;
When Industry his garnered treasure fills
With richest stores from fields of ripened grain;
When slow across the fields the pondrous wain,
Deep laden with the yellow ears, is drawn,
While from wide trees that overhang the lane,
The ripe red apples, shaken down at dawn.
Lie scattered thick and far along the level lawn.

The winding rill along the sunny vale
Sings its sweet song to cheer the reaper's heart;
And oft its voice the pensive autumn gale
Will join and cause the rustling leaves to start;
While scores of screaming blackbirds bear their part,
With varied notes. yet full of melody;
And troops of noisy boys, with dog and cart,
Are hasting to the hills with youthful glee,
To shake the clustering nuts from the tall walnut tree.

But soon this beauteous pageantry shall fail,
And every mellow tint of Autumn fade;
A melancholy murmur fills the gale,
And sorrow saddens o'er the yellowing glade;
Through thickening clouds the suns of autumn wade,
And beauty sets upon the hills no more;
The verdure of the wood is prostrate laid,
And soon the Autumn rains begin to pour,
And down the craggy rocks the swelling torrents roar.

Such is the fortune of majestic man!
The leaves of fragrance round his forehead flow,
The laureate wreath, that gales of fortune fan,
For which he climbed so high or stooped so low;
But soon approach the tempest clouds of wo,
To mar the beauty of his brightest deed;
Yet while he mourns his fortune's overthrow,
He looks to heaven for some more glorious mead;
Thus to the autumn winds I tune my Dorick reed. [*Selected.*

Domestic Economy, Recipes, &c.

Yankee Brown Bread.

Two quarts of Indian meal.
Two quarts of rye meal.
Three pints of milk or water.
Two teaspoonfuls of salt.
Half a pint of strong fresh yeast.

Having sifted the rye and Indian meal into a large pan, mix them well together, adding the salt. Boil the milk or water in a sauce-pan, and when scalding hot pour it on the meal, and stir the whole very hard. If too stiff, add a little more warm water. Let it stand till it becomes only of a lukewarm heat, and then stir in the yeast. Knead the mixture into a stiff dough, and knead it long and hard for at least half an hour. Then cover the pan with a thick cloth that has been previously warmed, and set it near the fire to rise. When the dough is quite light, and cracked all over the top, take it out of the pan; divide the mass in half; make it into two loaves; knead each loaf well for ten minutes or more; and then cover and set them again near the fire, for half an hour. By this time have the oven ready, put in the loaves directly, and bake them at least an hour and a half. This bread is considered very wholesome.

Should you find the dough sour, you may rectify it by kneading in a teaspoonful of pearlash, dissolved in a little warm water.—*Selected.*

Small Beer.

The receipt below for making *small Beer* for this hot weather, is too good to remain so little known. If you are disposed to insert it in your paper, you may promote the comfort of your friends and the cause of temperance.

For making 3 gallons of Beer or 1 pail full,—Take
1 quart West India Molasses,
20 drops Oil Spruce,
15 " Oil Wintergreen,
10 " Oil Sassafras,
Fill the pail with hot water—mix them well—let it stand until it has become blood warm—then add one pint yeast—let it remain 10 or 12 hours—bottle it—and in three hours it will be fit for use, and first rate.

BEEF-TEA—When one pound of beef, free of fat, and separated from the bones, in the finely chopped state in which it is used for beef sausages or mince meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel from the coagulated albumen, and the fibrine, now becoming hard and horny, we obtain an equal weight of the most aromatic soup, of such a strength as cannot be obtained, even by boiling for hours, from a piece of flesh. When mixed with salt, and the other usual additions by which soup is usually seasoned, and tinged somewhat darker by means of roasted onions or burnt sugar, it forms the very best soup which can in any way be prepared from one pound of flesh.—*Liebig.*

HARVEST DRINK.—Ten gallons of cold water, 1 gallon of molasses, 1 qt. of vinegar, and ½ lb. of ginger, well stirred together, makes a refreshing drink. Try it. Spirituous liquors, are, as they ought to be, almost entirely banished from the harvest field.

ARTIFICIAL ICE.—It is said that a mixture of four ounces of nitrate of ammonia, and four ounces of subcarbonate of sodium with four ounces of water in a tin vessel, will in three hours produce ten ounces of ice.

To make a Minute Pudding.—Stir flour into boiling milk, to the consistence of a thin hasty pudding, and in fifteen or twenty minutes it will be fit for the table.—Serve with sauce, to suit the taste.

Answers to Inquiries.

"INSECT IN WHEAT."—A. E., Cicero, N. Y. The insect forwarded by you is the Hessian fly, (*cecidomyia destructor,*) in the flax-seed state.

CUTTING STRAW AND CORNSTALKS.—J. B. For cutting hay and straw we should prefer Hovey's or Stevens's cutter; for cornstalks, if they are to be mashed fine, we should prefer Wheeler's. Prices from $10 to $25, according to size—the latter for horse power.—All kinds can be had at the Abany Agricultural Warehouse.

PEATY MOULD.—A. C. R., Walden's Ridge, Tenn. We think the peaty mould you describe could hardly fail to be useful to soil deficient in organic matter, as yours appears to be. The specimen you sent has been examined by Mr. SALISBURY, assistant to Dr. EMMONS, who finds it to contain in 100 parts,—organic matter 39.80; water, 1170; silex, 40.10; alumina, peroxide of iron, with a trace of phosphates, 4.50; lime, 0.65; magnesia, a trace.

SOILING COWS.—Erie county, N. Y. In answer to the question, which is most profitable, to feed cows in the yard or pasture them, through the summer? we should say that where land is so cheap as it is in your section, it would probably be cheapest to pasture them. As to the next question, which we should prefer for feeding, lucerne or clover? we answer, lucerne—that is, we think lucerne best, but it is not so easily grown on most soils. Unless you have a very rich, deep, loamy soil, it would be safer to try clover. It will require from a half an acre to an acre of land per cow, according to the quality of the soil, and the productiveness of the season.

PATENT OFFICE REPORT FOR 1847.—G. P. P. One hundred and fifty thousand copies of this report were ordered published by Congress for gratuitous distribution. It is probable copies can be obtained by addressing any Senator or Representative.

LOCUST-TREE BORER.—Addison, N. Y. There are three species of borer which attack the locust-tree. They are sometimes very destructive, and kill many trees which stand in exposed situations. The best prevention of them which we have known, is to set the trees in compact form, making a dense grove of them. We have seldom seen those so situated much injured, except a few of the outside trees. If any one can suggest a better remedy we should be glad to hear it.

CANKER-WORM.—C. C. H., Cornwallis, N. S. The most common mode of preventing the ravages of this insect is tarring the trees. As they sometimes appear in the fall or early winter, if the weather is favorable, and ascend the trees, where they deposite their eggs which are hatched the ensuing spring, the tarring, to be effectual, must be applied at that season as well as in spring. The tar is injurious to the trees, binding the bark and checking the circulation of the sap; to prevent which it is best to fasten round the tree a belt of old canvass or coarse cloth, first applying to this a coat of clay wash to prevent the tar from striking through, and afterwards tarring on that. The tar should be made soft by adding cheap oil, and should be applied with care every evening just before dusk, as the insects move principally in the night. Circular troughs of lead, in which oil is to be kept, have been contrived to put round the trees; but we are not able to say whether they have been found so useful as to supercede the use of tar. Plowing the ground around trees infested with canker-worms, late in the fall, and thus exposing the insects, many of which are then in the crysalis state, to the action of frost and air, has been found useful.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last from Many Subscribers, W. B. H., J. P. F., A Subscriber, Jas. Mapes, E. M. Cramer, H. C. B., W. R. Smith, Alb. C. Richard, E. C. Frost, Edward Jessup, H. W. S. Cleveland, C. E. G., W., E. A. G.

Books, Pamphlets, &c., have been received as follows: Report of the committee on Agriculture in the House of Representatives, from the writer, the Hon. J. I. Slingerland.—Thompson's Coin Chart Manual, containing 613 fac-similes of gold and silver coins.—Annual Report of the Mahoning County (Ohio) Agricultural Society, from J. M. Edwards.

Potato Disease.—We have received too late for this number, a communication on this subject from C. E. G. He states that the disease has made its appearance in the neighborhood of Utica. It has also appeared in this vicinity, and many other parts of the country; but to what extent it will injure the crop, cannot yet be ascertained. We have seen some lots early planted, that were already more than half destroyed.

Prof J. F. W. Johnston.—We are authorised to state that the Secretary of the N. Y. State Ag. Society has received a letter from Prof. Johnston, in which he says that owing to the pressure of business on his hands at the present time, he has concluded to postpone his contemplated visit to the United States till next year, when he hopes to spend several months among us.

"Honorable Testimony."—The late Elijah Willard, Esq., of Jonesborough, Illinois, a subscriber and correspondent of the Cultivator, directed by his will, that four entire setts of the work—fourteen volumes each—should be purchased and presented to the farmers in the neighborhood of his late residence. We acknowledge the reception of the order, which has been filled—the volumes being bound in uniform style.

Blue Buckwheat.—Mr. Lotan Smith, of Liberty, Sullivan county, N. Y., has left with us for distribution a sample of grain known by this name. He states that it is a surer crop than common buckwheat, and will make more flour to the bushel—is not injured by hot sun, and can be safely sown by the 20th of June.

Devon Cattle.—The attention of those wanting this valuable kind of stock, is invited to the advertisement of Mr. Cowles, in this number. He has taken great pains in the selection of his breeding animals, and has many good specimens of the breed.

Produce of one Grain.—Mr. Kirtland, of the Cantonment Farm, Greenbush, has left with us a bundle of straws, the product of a single grain of Multicole rye, the present season. There are 124 stalks, with fair heads. The grain came up last spring, and in consequence of standing by itself, and being later than the fall-sown rye of the same kind, it did not fill well; but the number of stalks indicates an astonishing reproductive power.

Fitzgerald's Portable Burr-Stone Mill.—We have lately witnessed the operation of this mill by horse-power. With one of Wheeler's powers, moved by one horse, it ground corn and oats sufficiently fine for "feed," at the rate of from four to five bushels an hour. We saw the same mill tried for grinding wheat —steam being applied to it, with a three-inch belt. Two bushels of very hard wheat were well ground in thirty minutes. There are bolts belonging to the mill, by which excellent flour can be made.

Stafford's Process of drying Grain.—In our June number we spoke of this invention. Mr. Stafford has since sent some corn-meal, prepared in his way, to the Secretary of the N. Y. State Ag. Society, for distribution. We have tried it, and found it excellent, both for bread and puddings.

Lawrence Scientific School.—We are pleased to learn that this very important and valuable branch of Harvard University, continues to receive the well-deserved countenance and encouragement of the public. The chemical department is under the charge of Prof. E. N. Horsford, whose interesting letters from Germany, while he was a student in the celebrated Giessen Laboratory, and many other able articles from his pen, have been read with much satisfaction by the readers of the Cultivator. Lectures will be given on zoology and geology, as heretofore, by Prof. Agassiz. The term commenced on Monday, the 28th of August. The general course of instruction will be essentially the same as was pursued last term, of which we gave some notice in our current volume, page 127—(April number.) Particulars can be ascertained by applying to Prof Horsford, at Cambridge.

Atmospheric Churn.—We have witnessed the operation of a churn by this name, said to have been invented and patented by Johnson & Lewis, of Sangamon county, Illinois. Its chief peculiarity consists in forcing atmospheric air through the cream or milk, by means of a hollow upright shaft, having holes in the upper end, to the bottom of which is attached a transverse tube, open at each end—the latter being made to revolve horizontally through the cream by means of gearing attached to the shaft. The turning of the shaft causes the descent of the surrounding air, which passes through the cream, and escapes from its surface in the form of bubbles. It is claimed that butter can be produced by this churn, from cream, in less than five minutes, and from new milk in fifteen. In the trial which we witnessed, butter was produced from cream in *seven* minutes, and from milk in *nine*. Mr. Emery was present with one of Kendall's churns, and produced butter from cream in *ten* minutes. An equal quantity of cream was used by both churns—the Atmospheric produced *one pound* of butter, and Kendall's *one pound seven and a half ounces*. Such was the result on this trial—how it would be on other trials we cannot say; neither can we say positively, what was the occasion of so great a difference in the amount of butter produced by the two churns. The Atmospheric churn appears to operate on a correct principle—that of mingling the air with the cream; but we are not in favor of such *rapid* churning. Having formerly had some experience in making butter, we should prefer that the churning, for a quantity of ten to twenty pounds of butter or more, should be prolonged to thirty minutes, at least. According to our experience, the best butter is not produced by a very *short* nor a very *long* period in churning. If it is churned too quick, the separation is not complete, and the butter, besides being less rich, is deficient in quantity; if the process is continued too long, the butter is likely to be *oily*. We think our best butter makers would decide that churning for ordinary quantities, should occupy from thirty to fifty minutes.

Cheese and Exports.—Herkimer county, N. Y. has produced 8 million pounds of Cheese annually, St. Lawrence 9 million, and the whole state, according to the census of 1835, 36 millions. The amount received at tide water on the Hudson, has increased from 1834 to 1846, from six million to thirty-five million. From 1840 to 1846, the amount exported has increased from 700,000 to 8,600,000 lbs.

Reclaiming worn-out lands.—A correspondent at Manchester, Ct., whose signature is J. P. F., states that he bought a tract of land which had been considered nearly worthless. He expended in hauling peat on it, and for one thousand bushels of ashes, about five hundred dollars, and he states that the fall feed, last season, was worth the interest of the outlay, and that the prospect the present season is more favorable, affording good encouragement for the improvement of Connecticut worn-out lands.

South-Down Sheep.—At the late letting of Mr. Jonas Webb's South Down rams, Cambridgeshire, Eng. 67 were let at an average price of £23 10s. ($117.50) per head, for the season. One lot for £79 (395,) and three yearlings at an average of £60 ($300) each, for the season.

Mr. Colman.—The occasion mentioned in the above paragraph drew together an assemblage of more than two hundred agriculturists and gentlemen from various parts of Britain. Our countryman, Mr. Colman, who had just returned from a long agricultural tour on the Continent, was present, as was also another American gentleman, Mr. Bassett. In reply to a complimentary toast by the chairman of the meeting, Lord Hardwicke, Mr. Colman made an eloquent speech which was received with cheering applause. He alluded to his continental tour, and said the best agricultural district he had passed through was Flanders. The great success of the system there pursued, he thought was attributable to the saving and application of urine. He spoke of the beet culture which he had seen in France; he thought it very profitable. The refuse, after the root had passed through the process for sugar making, was very valuable for feeding stock. He saw in June last, a large lot of cattle and sheep which were fattening from the refuse of the crop that had been used for sugar the previous fall, and the animals were in fine condition. As to improvement in live stock, however, Mr. C. thought it was "clear as the light of day," that the farmers of England "were not only a whole head, but a whole length, before all other countries!" He closed by some happy allusions to the peaceful relations existing between England and the United States.

Challenge.—Mr. Thos. Bell, of Morrisiana, Westchester county, N. Y., offers to show his Durham bull, *Marius*, at the State fair at Buffalo, against any Durham bull that has been previously awarded the first premium of the New-York State Agricultural Society, for $50 to $100 a side. The judges to be named on the ground, and to be not less than three in number. This bull was bred in England by the late Earl Spencer. He will be offered for sale at the Fair, under the direction of the officers of the New-York State Agricultural Society. Mr. Bell had limited the time of the acceptance of this challenge to the 20th of August, but we hope he will conclude to leave it open till the first day of the State Fair—September 5th.

Normandy Cattle.—The editor of the *Maine Farmer* inquires of the editor of the *Massachusetts Plowman* in regard to a bull and two cows, supposed to have been imported from Normandy by the Massachusetts Society for Promoting Agriculture, about the years 1817 or '18. The *Plowman* calls for "information" in regard to the stock. As an "*outsider*," we would inquire in the first place whether the *Society* ever imported any such animals? The Journal of the Society for 1817, states that two cows and a bull had been *ordered*, but we never heard of their arrival. Hon. John Hubbard, imported a Norman or Alderney bull, which he presented to the Society alluded to. In 1823, the writer saw this bull at the society's show at Brighton. He was then two years and a few months old. He was offered for sale at auction, but as a satisfactory price could not be had for him, he was bid in by one of the officers of the Society. He was kept for several years by the late John Prince, Esq., of Roxbury. He was of a light chestnut color, of slender and rather loose make, indicating a feeble constitution. Mr. Prince and other gentlemen imported cows of the same breed, about the same time. We several times saw these cows,—or some of them—their progeny, and also some of the half-blood progeny of the bull. They seemed generally deficient in constitution. The cows, however, produced some good stock by bulls of other breeds. We recollect particularly, seeing at Mr. Prince's some fine calves and young stock, some of which were a cross from the Norman cows by the imported bull *Holderness* or *Fortunatus*, and some a cross from the Hereford bull, *Sir Isaac*, sent out by Admiral Coffin.

Wire Worm.—A successful farmer of this vicinity, Mr. D. D. T. Moore, states that he has tried various substances for preventing the ravages of the wire worm, none of which, excepting sulphur, proved of any use. An Irishman told him that sulphur had been used with advantage in Ireland. Before planting his corn, Mr. M. wet it and rolled it in flour sulphur, and afterwards coated it in plaster to prevent the sulphur from wasting. He saved a crop by this means where he had failed for three years before. We see no reason why the sulphur might not be equally effective for any other grain.

Subsoil Plowing.—Clark Beardsley, of Avon, Mich. states in the Michigan Farmer, that he harvested wheat on *ten acres* of good wheat land in 1844, which had been much run for 17 years, and the product was only eighty-five bushels. The soil was clay and was full of "foul stuff." The next year he subsoiled it with a span of horses and two yoke of oxen, by once plowing, and thoroughly subdued the foul stuff, and obtained in 1846, from the same ten acres of land, over three hundred bushels of wheat. And yet we know a farmer of large and ample means, who admits that the subsoil is more fertile for wheat than the upper soil, who says he "cannot afford" to use the subsoil plow!

Tall Corn.—Dr. Lee writes to his associate of the *Gen. Farmer* that the corn on the Savannah bottoms was "from 12 to 18 feet high." His friend inserts a note stating that he suspects there is "some mistake in the figures," but he "follows copy." We have seen corn in Western Virginia, and in Ohio, which was taller than the Doctor mentions, and once measured a stalk taken from a field belonging to Seth Bailey, a few miles below Marietta, on the Ohio river, which was *nineteen feet two inches* in length, cut even with the surface of the ground. We presume such evidence of this fact could be had as would be received in a "court of justice."

"Do Toads Sing?"—Our friends of the *Prairie Farmer*, in answer to this question, proposed by a correspondent, say, they "never heard a *toad* sing, or of one's singing;" but they think "*frogs* do little else." There may be some doubts as to what should be called *singing*. People have different musical tastes, as was illustrated by the old story about the "heavenly music" made by a pack of hounds. Now frogs and toads, (we don't mean *tree*-toads, everybody knows their *trills*,) both *make a noise*—probably from the same impulse—and we are not aware of any *rules* that would recognise the one as *singing* and reject the other. If our friends will secure some well-grown toads at the "pairing season," or about "planting time," and let them loose at the dusk of evening, they will quickly have the satisfaction of listening to the "notes" of the "harsher sex." They swell out their throats till the sound bursts forth with almost as much "power" and "compass" as that of a fashionable *biped* "performer." We have *seen and heard* all this.

Annual Address at the State Fair.—The Hon. John C. Spencer, of Albany, has consented to deliver the customary address before the New-York State Agricultural Society, at the meeting at Buffalo.

"The Plow, the Loom and the Anvil."—An advertisement of this publication will be found in this number of the Cultivator. Its senior editor, J. S. Skinner, Esq., is well known as the pioneer in the establishment of agricultural periodicals in this country, having started the *American Farmer* in 1819. He still wields a vigorous and ready pen, and we have no doubt will render the work alluded to worthy the public patronage, which we trust will be liberally bestowed.

Materials for Manure.—During the dry weather of September and October, the farmer will find his account in collecting muck or peat, and such loose vegetable matters as are to be had, for the purpose of covering his barn-yards to absorb the urine from his stock and prevent the waste of the liquids from the manure. Excepting while the weather is very cold, peat or muck, if kept tolerably dry, may be used in the stables, and by absorbing the liquids, converts them into a portable form, and by retaining the nitrogenous principles, and adding them to the compost-heap, a proper decomposition of the mass is secured. Thus a valuable article, which would otherwise be wasted, is saved, and its addition to other materials increases *their* value also. A good supply of peat and articles for litter should be so cured before winter sets in.

Thompson's Bank Note Reporter.—We have received this periodical several years, and consider it almost indispensable to business men. It contains a complete list of all the banks in the United States and British Provinces, with lists of Counterfeit bills, rates of exchange, &c. It is published daily, weekly, semi-monthly and monthly—weekly $2 a year—twice a month, $1, and monthly, 50 cents. Address J. Thompson, Exchange Broker, 69 Wall-st., New-York.

Guinea Grass.—In the Cultivator for 1845, page 210, "B. M." of Tuskaloosa, Ala., recommends the culture of this grass "for the south." In the Southern Cultivator for August last, the same writer states that he is convinced by two years' experience, that "*it is a very serious pest*," and he is therefore, desirous of publicly retracting the recommendation he had before given. He states that it does not make good hay, and that it takes such firm possession of the ground that it is almost impossible to eradicate it.

Seeding Grass Lands.—September is a favorable season to sow grass seeds. In many sections, grass or hay yields a more profitable return than any other crop, and it hence becomes an object to keep the lands in mowing or pasturage as long as practicable. On quite moist soils, the sward may be kept up, and the production of herbage continued without diminution, by occasional top-dressings of manure. But on drier soils, it often becomes necessary to renew the grass from seed. In order to avoid the loss of a crop, it is practised in such cases, to plow the sward soon after the hay is taken off, with a level, smooth furrow, and after using a light, sharp harrow, to sow the grass-seeds and brush them in. The time of sowing may vary according to the state of the ground. If very dry, it is best to wait for rain; but if sufficiently moist to insure the germination of the seed, the latter part of August or fore part of September is generally considered the best time. Yet we have known lands sown to grass, as late as October, with good success. If the weather during fall is favorable, the grass gets so well set that it stands the winter, and grows well with the opening of spring. The first crop is however, considerably later, though it often gives a good burden at the first mowing. It is proper to remark that this mode of seeding is not recommended for lands that are much acted on by frost; that is, lands on which crops are liable to "winter-kill."

Kyanizing Wood.—The *Kennebec Journal* states that an establishment for carrying on this process has been erected at Augusta. The timber is first placed in iron boilers about fifty feet long, and steam is applied to it. The steam is then condensed by ejecting cold water, thus producing a vacuum and opening the pores of the wood; after which a solution of coal tar, (obtained from the bituminous coal, in the process of gas making) is let into the boilers from an immense vat overhead, and a great force applied to it by means of a force-pump worked by steam. After six or eight hours from the commencement of the operation, the solution is drawn off into a vat below, from which it is pumped up to the one above, ready to be again used. The ends of the boilers are then taken off, and the timber drawn out all together.

Appreciation of Agricultural publications.—E. Newton, Esq., in his address before the Mahoning county, (O.) Agricultural Society, observes:—"Agricultural publications are the best and cheapest mode of obtaining information upon all subjects of husbandry. They cost but little, and are within the power of all. One good day's work will pay for one, and all have an abundance of time to read them. They contain the experience and observations of the most scientific farmers in the country; the prospects of crops in all countries, and the condition of the market; facts all important to be known and understood. I have been surprised to see how few are taken, and have often been told by farmers that they were not able to pay for them. I can hardly appreciate the remark. Every one is able to pay for that which will immediately return them an hundred fold. I believe that a single number of any of the publications, if thoroughly read, would be found to contain some fact, if adopted, that would more than pay for the full year. By raising an extra bushel of wheat, it would pay for the year."

Potato Disease in England.—The last accounts received from England state this malady had made its appearance in many districts, and that the loss of a considerable portion of the crop was inevitable. Accounts from Ireland, also, state that the disease had appeared there in many instances.

Small Pox in Sheep.—A disease called *variola ovina*, or sheep pox, has appeared in many flocks in England, and already occasioned great loss. It is said to be both infectious and contagious. The diseased sheep are affected with ulcers, resembling the sores produced by small pox in man. The English veterinarians are giving the closest attention to the disease.

Ants as food.—White ants, or termites, are eaten by various African tribes, both raw and boiled; and it is said the Hottentots "get into good condition on this diet." In India, the natives capture great quantities of these insects, which they mix up with flour, producing a kind of pastry which is purchased at a cheap rate by the poorer people. Some of the Africans prepare large quantities of them for food, by parching them in kettles over a slow fire. In this condition they are eaten by handfuls as delicious food. The traveller Smeathman states that he often ate them dressed in this way, and found them to be "delicate, nourishing and wholesome, resembling in flavor sugared cream, or sweet-almond paste." In Brazil, the abdomens of yellow ants are eaten by many persons. Humboldt states that in some of the South American countries, ants are mixed with resin, and eaten as a sauce. In Siam ants' eggs are considered a luxury; they are sent to table curried, or rolled in green leaves, mingled with fine slices or shreds of fat pork. In Sweden, ants are distilled along with rye, to give a flavor to the inferior kinds of brandy. Chemists have ascertained that ants secrete a pleasant kind of vinegar, or a peculiar acid called formic acid. We derive these facts from an article on "Useful Insects and their Products," in the Scottish Quarterly Journal of Agriculture.

Grub-Eaters.—In order to acquire that plumpness which is deemed in the East a beauty, the women of Arabia and Turkey swallow, every morning, three specimens of a grub dug out of the filth of the garden and fried in butter. Turkish women cook and eat a certain beetle in butter to fatten themselves. When an English traveller expressed his surprise and disgust at some Arabs eating insects, the men justly retorted that it was poor affectation in a person who could swallow raw oysters. The first man that ever made the experiment of swallowing a raw oyster must have been a rare brave fellow; but while we thank him for introducing us to this delicious mollusk, we may regret that he did not display his gastronomic courage upon cockchafers, and other small short-horns. *J. H. Fennell, in Scottish Quar. Jour. Ag.*

India Rubber Boat.—A correspondent wishes to know whether such an article has ever been used—its cost—and whether it could be had in the city of New-York. Perhaps our friend of the *Spirit of the Times* can answer.

Method of distinguishing Iron from Steel.—Drop a little weak aquafortis on the metal; let it remain for a few minutes, and then wash it off with water. If it is steel, the spot will be black; but if iron, the spot will be whitish grey.

Creosote possesses the power of coagulating albumen, and rendering all animal substances imputrescible. It is to this principle that smoke owes its powers in preserving meat.

The Fig.—In countries where the fig is cultivated, certain species of gall-flies are made to assist in ripening the fruit. "The fig consists of a pulp, containing a number of seed-like pericarps, inclosed in a rind. It has no visible flower, for the fruit rises immediately from the joints of the tree, in the form of little buds, with a perforation at the end, but not opening or showing any thing like petals or the ordinary parts of fructification. As the fig enlarges, the flower comes to maturity in its concealment; and in some countries the fruit is improved by a singular operation called *caprification*. This is performed by suspending on threads above the cultivated figs, branches of the wild fig, which are full of a species of gall-fly. When the insect has become winged, it quits the wild figs, and penetrates the cultivated figs for the purpose of laying its eggs; and thus it appears both to insure the fructification, by dispersing the pollen, and afterwards to hasten the ripening, by puncturing the pulp, and causing a dispersion or circulation of the nutricious juices."* A similar effect is sometimes produced by puncturing the figs with straws dipped in olive oil.

Keeping Pumpkins.—Our friend Dr. Holmes, of the *Maine Farmer*, states that he had a pumpkin, of the growth of 1847, presented him on the fourth of July. It had been kept in a dry room where the temperature had not been below the freezing point. If the Doctor will get some seed of the "seven years" pumpkin and raise a lot of that variety, he will find it no rarity to have sound pumpkins on the fourth of July, or at any other time. We have frequently seen those that were four or five years old, and we cannot say how much longer they would keep.

Fruitfulness.—John Lewis, of Knox county, Ohio, says that in 1834, he set out a young apple-tree of the variety known by the name of Milam, and in 1846, 12 years from the time of transplanting, it bore thirty-five measured bushels of apples. The Milam is a fine variety, cultivated in central and southern Ohio, of medium size, of a greenish color with dull red stripes, and of a mild sub-acid flavor.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Aug. 14, 1848.

FLOUR—Genesee per bbl. $5.37½a$5.50—Ohio, $5a$5.12½

GRAIN.—Wheat, per bu., white Ohio $1 06—red 91 cts.—Corn, round yellow, 68 c — White Virginia 61 cts.—Rye, 70a71c.—Oats, 40a42c. dull.

BUTTER—Orange County, per lb., 15a17c.—Western, dairy, 11a12½ c.

CHEESE—per lb., 5½a7c.

PORK—Mess, per bbl., $11.37½a$11.50—Prime, $8.94a$9.

HAMS—Smoked Western, per lb., 6a9c.

LARD—in kegs, per lb., 7¾a7⅞c.

HEMP—American dew rotted, per ton, $135a$145.

HOPS—First sort, per lb., 5c.

COTTON—Upland and Florida, per lb., 5a7½c.—New Orleans and Alabama, 5a8½c.

WOOL—(Boston prices,) Aug. 12.

Prime or Saxon fleeces, washed per lb........	42a45	cts.
American full blood fleeces,....................	38a40	"
" half blood do	30a32	"
" one-fourth blood and common,.....	28a29	"

☞ There is little doing in salted provisions. Beef is heavy and without sales. There is fair inquiry for butter and cheese of good qualities The demand for flour and grain is moderate. Cotton is heavy. The wool trade is still dull, and sales light.

TO SEEDSMEN AND NURSERYMEN.

ORDERS will be received by the undersigned for the purchase and transmission of seeds, plants, shrubs and trees, from the most celebrated French Nurseries, on moderate terms and with despatch. LIVINGSTON, WELLS & CO., 10 Wall-st.
New-York, Sept. 1, 1848.—2t.

NURSERY OF J. J. THOMAS.
Macedon, Wayne Co., N. Y.

THIS Nursery now contains many thousand fine trees, of large, handsome, and thrifty growth, consisting of Apples, Pears, Peaches, Cherries, Apricots, &c., of the best standard sorts, as well as the finest only of new and newly introduced varieties; all of inferior merit being rejected; *and in no case are any propagated for sale except those thoroughly proved in bearing.*

When purchasers desire, selections of the best for affording a regular succession of fruit through the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y.

TO WOOL GROWERS.

I HAVE recently sold my flock of Paular Merino Sheep to A. H. Avery; who has on hand a number of young Paular Bucks for sale. Also, a few ram lambs, sired by a buck from the flock of J. A. Tainter Esq., imported from Europe in 1846. This Buck is of extraordinary size, and his first fleece—well washed and free from gum—weighed near 10 lbs.

It is believed the lambs, from this splendid young buck, will exceed in size and amount of wool, even those heavy fleeced Paulars, which I have heretofore sold. Orders addressed to A. H. Avery, Galway, Saratoga county, N. Y., will be promptly attended to.
Aug. 1, 1848—1t. R. A. AVERY.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* Leached Ashes, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,
May 1, 1848—6t. Cabotville, Mass.

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* *Vegetable substances used in the Arts.*

STRAWBERRY PLANTS.

OF most of the celebrated fine varieties, for sale at the nursery of J. J. THOMAS. Macedon, Wayne Co., N. Y. Among these are the following:—Hovey's Seedling, Large Early Scarlet, Dundee, Prolific Hautbois, Duke of Kent, Black Prince, Boston Pine, Swainstone's Seedling, Myatt's Eliza, Hudson Bay, Red and White Alpine. &c. A part can be furnished in quantity at 75 cents to $1 25 per 100—the remainder at 19 to 38 cts. per dozen. Packages forwarded by Express, and no charge for packing where orders amount to $3 or more.

Several of the above named varieties, with common culture, usually attain an inch to an inch and a-quarter in diameter, and are of excellent quality. If the roots are immersed in mud when set out, they may, with a few waterings, be transplanted in summer with scarcely a failure; and they should in no case be set later than the first of autumn, that the roots may become well established before winter, and good crops be afforded the next summer.

GREATEST IMPROVEMENT OF THE AGE.

Smith's Lever Drill.

Patented November 4, 1846, to H. W. SMITH.

THE advantages of this machine as fully established by use and experiment, are

1.—A saving of from two to three pecks of seed per acre.

2—An equal distribution of any given quantity of seed, covered at a uniform depth.

3—A saving of labor; a boy and team, with this machine, can complete from 8 to 10 acres per day; and the surface of the soil is left in such a position that it does not encrust, and undergoes a constant course of natural cultivation by the action of every shower, so that the gases and atmosphere readily penetrate,—hence,

4.—The grain is not so liable to be thrown out by frost.

5.—It stands firmer and stronger, and is not so liable to be injured by rust or the fly

6.—Where these machines have been used, the saving of seed and increase of product, amounted to from 20 to 25 per cent.

The great improvement in this machine, over all others of the kind, is its simplicity, durability and economy, and the facility and certainty with which it can be *set* or *altered* by a regulated *index* and *guage* to drill or plant any given quantity of grain per acre, at any given depth.

These machines are now being made at Syracuse.

County rights to manufacturers sold on reasonable terms.

For further particulars address the undersigned, post paid at Syracuse.

C. MASTEN,

Aug. 1, 1848.—3t.

FARM FOR SALE.

THE Subscriber offers for sale his farm situated in the town of Ghent, Columbia county, N. Y. 10 miles from Hudson, on the Hudson and Berkshire Railroad, four miles south of the Chatham Depot on the Western Railroad, ¼ mile east of the Union Turnpike, and 7 miles from the village of Kinderhook.

This farm contains 234 acres, 40 acres of which is covered with good timber. The whole is well watered by streams and never-failing springs, and in a high state of cultivation. On the premises is a large dwelling house, nearly new, built in the very best manner, and replete with every convenience The out-houses, consisting of a large barn, sheds, carriage houses, &c &c., are in good condition The fences, consisting chiefly of stone wall, (built with stone from a quarry on the premises.) are in excellent order. The soil is free from stone, is easy of tillage, and bears as high a reputation for productiveness as any in the Empire State. For terms and further particulars enquire on the premises.

TOBIAS L. HOGEBOOM.

Ghent, July 13, 1848—2t.

WHEELER'S PATENT HORSE POWER AND THRESHER.

THE above machines having attained a wide introduction among all classes of Farmers and Mechanics, and having without exception, given the fullest satisfaction, we do not hesitate to recommend and warrant them to any and all wishing such machinery—For prices, particular recommendations, &c., see the Albany Cultivator for February, 1847 and 1848, also for May, 1848. Also Catalogue, gratis, at Store, Nos. 10 and 12 Green st , Albany. or by mail.

HORACE L. EMERY.

General agent for the manufacturer, wholesale and retail.

EAGLE PLOWS.

NO Plow has been so long before the public with so few alterations, come into so general use, or received so many and so high grade premiums. as the genuine Eagle Plow. made by the inventors, Messrs. Ruggles. Nourse & Mason.

Notwithstanding the great diversity of soils, modes of culture, and the constantly increasing competition, and being subjected to the most thorough and persevering trials ever had in this country, the Eagle Plow still stands at the head of the list for excellence of work, materials, durability, workmanship, ease of draft, and price.

Some of its merits over other kinds in use, are that the metal is of such a mixture of irons as gives them strength equal to malleable iron and admits of the chilling process on all the wearing parts, which causes them to wear sharp, and do three to five times the amount of work, as the ordinary kind of plow casting—while the risk of breaking is not increased by the process

All sizes of the above plows constantly on hand at wholesale and retail, at manufacturer's prices, at the Albany Agricultural Warehouse. Nos. 10 and 12 Green St , Albany. All plows warranted.

For prices description, &c., see Catalogue, gratis at Store or by mail.

H. L. EMERY.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent. lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers.

E. J. BURRALL.

Geneva. April, 1848—6t.

HYDRAULIC RAMS.

A COMPLETE assortment of these useful machines constantly on hand at the Albany Agricultural Warehouse, where one in constant operation may be seen.

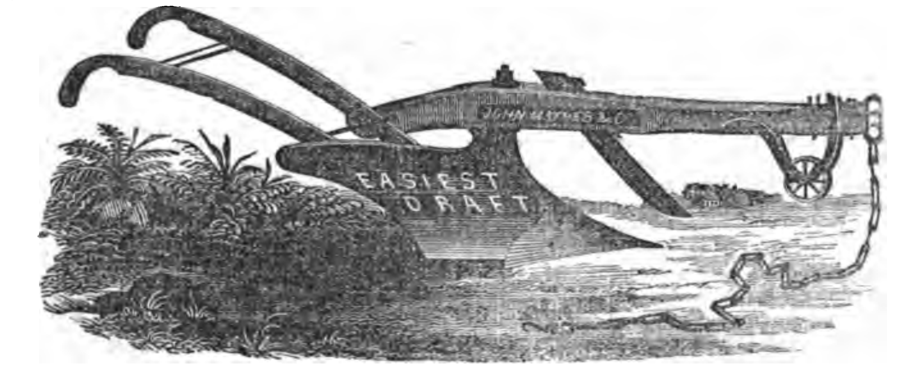
H. L. EMERY.

See the following *Certificate.*

I have used the Improved Hydraulic Ram since the latter part of October, 1847. and can recommend the same to all who may wish to be supplied with running water in a permanent and durable manner. The distance from my spring to my house is 56 rods; the elevation about 70 feet; the fall from the spring to the ram is 6 feet. I have more than enough water from a half-inch pipe to supply my house, and to water 50 head of cattle, and would not be deprived of the same for double what it cost.

CLARK LEWIS, 2d.

German, Chenango Co.. N. Y., April 15, 1848.



JOHN MAYHER & CO.,

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New-York, which ll be sold at lower prices than they can be purchased at any other hment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayer & Co.'s celebrated and unequalled First Premium Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, August 1, 1848.—tf.

THE PLOW, THE LOOM AND THE ANVIL.

AN Agricultural Journal published *monthly* in Philadelphia, (as successor to the Farmer's Library,) by G. B. Zieber & Co., edited by J. S. Skinner & Son.—Terms, five copies for $10, two copies for $5, and three dollars for a single subscription. The object of this Journal, as its title indicates, is to discuss and disseminate, with zeal and earnestness, not only the philosophy and practice, but also the *political economy* of American Agriculture. It is designed to convince the Farmer and the Planter, that encouragement and preference of American over foreign labor, in every brach of industry for which we have the climate and materials, is a question which interests *the cultivators of the soil above all classes of people:* and to show that what American Farmers most need now, is not so much instruction how to *use the plow*, but how and by what policy we can have the greatest number of thriving consumers, demanding here at home, the products of the plow. In a word, "The Plow, the Loom, and the Anvil," is designed to show that, instead of a precarious dependance on ever fluctuating and uncertain *foreign* markets, as recommended in reports and speeches published and widely disseminated by the General Government, and by the New-York State Agricultural Society, our best and surest reliance under a wise policy, would be, on the *home market*, by giving fair and steady encouragement to *American Industry*, employed, and consuming at home, the products of American Husbandry.

In this earnest undertaking to propagate, what is believed to be the true conservative doctrine, the Editors have the countenance and good will of many of the most highly gifted and patriotic men of our country. Mr. Skinner is giving to it all his time and abilities, and relying on its success exclusively, as his only means of support. All he asks is that those who wish it success, will *subscribe at once;* and those who are opposed to his views will read attentively and judge as impartially as fixed opinions will allow.

Of all improvements in practical agriculture, and in the structure of the implements employed in it, the reader will be kept advised. The editors solicit "aid and comfort" from all the friends of domestic industry, *in all its forms:* not to be rendered as to the "agitators" in favor of free trade, in hard money, gratuities by thousands and hundreds of thousands, but by two neighbors in a V, and by clubs of five in a X.

Now among the oldest of the Editorial Fraternity, he will feel greatly obliged to any one of them who will give this one insertion, as it is kindly done here. Editors and Publishers take the risk of the mail. No formality is necessary, except to say—J. S. Skinner & Sons, or G. B. Zieber & Co., Philadelphia. $5 enclosed for two subscriptions. A. B.———Post Office.
C. D———Post Office.

Or, in this wise $10 for five subscribers and their address.

STRAWBERRY PLANTS.

HOVEY'S Seedling, Boston Pine, Large Early Scarlet, Crimson Cone, (one of the most vigorous, prolific and best), Hudson's Bay, Victoria, Bishop's Orange, 75 cents per 100, *cash*, for quantities not less than 500 plants in the whole. nor less than 100 plants of a variety carefully packed and forwarded as directed—Other varieties specified in our catalogue, at a reduction of *one-third* from the catalogue prices, when not less than 500 plants in the whole are ordered. Also the following new Ohio varieties; Burr's Seedling, 50 cts. per doz. $2.00 per 100 Burr's Mammoth, 1 50 per doz. Burr's New Pine, $1 50 per doz. Taylor's Seedling, $1 00 per doz., $4 00 per 100. Hudson of Cincinnati, 37½ cts. per doz. $1 50 per 100. Turner's Pine, (Montevideo Pine of Prince,) 75 cts. per doz: Also, the

ABERDEEN BEEHIVE STRAWBERRY,

Strong plants, well rooted in small pots, and carefully packed in a box for distant transportation; price $5 00, *cash with the order*, for 18 plants, including package. We imported our stock direct from Mr. Mathewson, of Aberdeen. Scotland, who originated this variety, and their genuineness may therefore be depended upon. Descriptive catalogues gratis on application, post paid.

Flushing, L I., Sept. 1, 1848. WINTER & CO.

GRANT'S PATENT FAN-MILLS.

I. T GRANT & CO, Junction, Rensselaer county, N. Y, continue to manufacture these celebrated mills. They have been awarded five first premiums at the New York State Fairs and the Fairs of other States, and in no instance has any other mill of the kind received a premium over them. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the last year they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society for 1847, it will be seen that they were tried by several large farmers, and highly approved One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains as before. Our *agents* are H. L. Emery, Albany; G. S. & F. A. Willis, Pittsfield, Mass.; Parsons & Dickinson, Springfield, Mass., John Mayher & Co., 195 Front Street, New-York; Benj. Myers, Newark, N. J.; S. & E. Hasbrook, Stone Ridge, N. Y.; James S. Brown, Newburgh, N. Y.; H. Warren, Troy; Hugh Van Alstyne, Kinderhook; S. & M. Peckham, Utica; E. Whitman, Jr., Baltimore, Md.; Fitzhugh Coyle, Washington, D. C; Denslon & Webster, Savannah, Geo. Address I. T GRANT & Co., Junction, P. O., Rensselaer county. N. Y., by whom all orders will receive prompt attention Sept. 1—4t.

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c &c.

F. A. GIFFORD.

Hudson, May 9, 1848—5t*

IMPROVED STOCK FOR SALE.

THE subscriber will take orders and execute them in the best possible manner, for—

Durham, Hereford, Devon and Ayrshire cattle. Price from $50 to $300 each, according to age and quality.

Saxon, Merino, Southdown, Leicester, and Cotswold sheep. Price from $10 to $30 each.

China, Sussex, Berkshire, and Lincoln pigs. Price per pair at three months old for the three first mentioned breeds, caged and delivered on board ship, $20. Price of the Lincolns, $30 per pair. These last are of a recent importation—color white, and grow very large.

All orders must be accompanied with the cash.

SAMUEL ALLEN,
mjulysept. 189 Water-street, New-York.

SELLING OFF.

LINNÆAN BOTANIC GARDEN & NURSERY. Late of Wm. Prince, deceased, *Flushing, L. I., near New-York.* Winter & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, who therefore intends to relinquish the business, the entire stock of this establishment, comprising every description, including the newest and choicest varieties of fruit and ornamental Trees, Shrubs, Vines and Plants, Roses, Greenhouse plants, Box Edging, &c., will be disposed of in lots to suit purchasers, at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of ten dollars or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, venders, and others wishing to purchase by wholesale, will be supplied at such reduced prices according to quality and quantity, as will probably prove satisfactory to them. Young stock, both in the Fruit and Ornamental departments, supplied very low by the quantity.

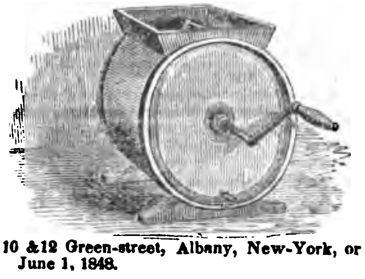
An opportunity is afforded to Amateurs and Nurserymen to obtain extra sized and many new and rare specimen fruit and ornamental trees, shrubs and plants, at very moderate prices.

Extra sized ornamental and shade trees for streets, lawns and parks, low.

The establishment, now in the highest order and densely stocked, will be disposed of upon liberal terms, offering from its location, celebrity, saleable stock, greenhouses, dwellings, and other conveniences for conducting the business, very superior advantages to any person disposed to pursue it.

It is requested that letters of enquiry, &c. be *post paid*. Descriptive Catalogues *gratis*.

August 1, 1848.—2t.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices, see Catalogue of Agricultural Warehouse gratis at Store, Nos 10 &12 Green-street, Albany, New-York, or by mail.

June 1, 1848. H. L. EMERY.

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

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THE HORTICULTURIST

AND

JOURNAL OF RURAL ART & RURAL TASTE.

Edited by A. J. DOWNING, Esq.

PUBLISHED at the office of the Cultivator, Albany, N. Y., by Luther Tucker, at $3 per year.—Two copies for $5. Vols. 1 and 2, completed with the June No. 1848, now ready for sale, either bound, or in paper covers to send by mail.

Contents of No. 2, Vol. III—for Aug., 1848.

A Chapter on Roses—The Wistaria Sinensis; Remarks on New Strawberries—Strawberry Culture and selection of varieties—The Geranium and its Culture—Remarks on the Culture of Native Grapes—New Mixture to Drive away Insects—New or Rare Fruits that have proved Excellent—Prof. Shepard on Agricultural Schools—Transactions of the New-York State Agricultural Society, for 1847—The Onondaga Pear on Quince Stocks—Belle Magnifique Cherry—Cutting out the Fire Blight—Garden Culture of Indian Corn—Fruit Culture at the South—German Greens or Siberian Kale—Horticulture in Carolina—Mr. Longworth's reply to Mr. Prince—Pomological Queries—New-Haven and Albany and Rensselaer, Horticultural Societies—Bugs on Vines—The Strawberry Question Again—New-York Strawberry Market—Answers to Correspondents—Proceedings of the Massachusetts, and Pennsylvania Horticultural Societies.

ILLUSTRATIONS—*Frontispiece*.—Souvenir Le Malmaison Rose.—The Geranium—Large Early Apricot—Burr's New Pine Strawberry—Buttner's Yellow Cherry—Cherry Currants.

The Horticulturist.—We invite the attention of the reader to the prospectus of the Horticulturist, published in another column. It is decidedly the best periodical of the kind now published, and should be in the hands of every nurseryman and fruit grower in the country. We have been an attentive reader of the Horticulturist since it was commenced and can heartily recommend it to the favorable consideration of the public.—*O. Free Press.*

"The Horticulturist," for June, is the last number of the second volume, and a new volume commences in July. We earnestly recommend this variety to all who desire to increase their qualities of fruit. The time is not far distant when the cultivation of *good* fruit in this region, will be deemed the most profitable product of the soil. Raising poor fruit is a useless waste of the soil.—*Vt. Phœnix*

THOMAS' FRUIT CULTURIST,

For Sale at the Office of the Cultivator.

MERINO SHEEP FOR SALE.

HAVING arrived at a point in which I desire to reduce my stock of Sheep, I have therefore concluded to sell about 600 Merino Sheep this fall, which have been bred with great care, and are inferior to none in the United States—200 of which are half bloods, from the importation made by Mr. Taintor. Nothing need be said to recommend them, for they recommend themselves.

Cornwall, Sept. 1, 1848.—3t. A. L. BINGHAM.

FINE DEVON CATTLE FOR SALE.

THE Subscriber will offer for sale at the show of the Hartford County Agricultural Society, to be held at Hartford on the 12th October next, a portion of his herd of Pure Devon Cattle, as follows:

1 Bull, 4 yrs old 28th June last, a very superior animal, bred by Lewis F. Allen, Esq., of Black Rock; has been awarded the first premium for three years in succession at the Fair of the Am. Institute.

2 Full blood cows or heifers.

3 or 4 Spring Calves.

The above stock was derived principally from the herds of Lewis F. Allen, Geo. Patterson of Md., and R. L. Colt, Esq. of N. Jersey, having recently purchased his entire herd.

Full Pedigrees of the stock will be shown at the Fair.

Farmington, Sept. 1, 1848.—1t. WM L. COWLES.

SALE OF SHORT HORNED CATTLE.

I WILL sell at Buffalo, during the days of the State Fair, on the 5th, 6th and 7th September next, under the directions of the Officers of the New York State Agricultural Society, Twenty to Twenty-five thorough bred Short Horned Cattle, consisting of Cows, Heifers and young Bulls. A catalogue with their pedigrees will be ready at the time of the fair

Also, I will sell at the same time, Fifty Merino Rams, bred from the Blakeslee flock, and Six South Down Rams.

References—A. B. Allen, N. York; Sanford Howard and B. P. Johnson, Albany; Francis Rotch, Butternuts; and L. F. Allen, Black Rock. JOHN M. SHERWOOD.

THE CULTIVATOR

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THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, OCTOBER, 1848. No. 10.

THE FARMS OF MESSRS. B. & J. LYNDE.

EDITORS OF THE CULTIVATOR—I recently spent a few hours very agreeably, at the farms of Messrs. Barnard and John Lynde, in Guilford, Vt.; and although I have but a few moments of leisure, I have thought that even a brief notice of some things which came under my observation, might be interesting to some of your readers. It seems to me that there can be no reading upon the subject of agriculture, more interesting or useful than notices of the operations of those successful, intelligent and practical farmers, who, in their practice, bring under contribution all the real and substantial improvements of the times.

The farms of the Messrs. Lynde contain over two hundred acres each, being a high swell of land, the surface moderately rolling, and the soil a strong, fertile loam, resting upon an impervious hard-pan, at the depth of 18 to 24 inches. Their buildings are substantial and spacious, presenting an appearance of neatness and good order. Upon one farm, the barns 65 by 40 and 30 by 40, and on the other, 70 by 45 and 30 by 40, with horse-barns and shed-lofts. Notwithstanding these ample accommodations for the storage of their produce, the present season has been so highly propitious for the hay crop, that they are troubled to find room for all their forage; and they will soon be under the necessity either of curtailing their manufacture and application of manure, or of building more barns. Doubtless, however, they find some alleviation for their troubles, in this respect, in the contrast presented by the condition of the sluggard, whose worn-out acres and generally dilapidated appearance, under a ruinous "skinning" system, have brought *him* to the necessity of requesting some shylock to "salt him down" with a mortgage; and whose perfect horror of all innovations upon that system—sitting like an incubus upon him—effectually prevents any improvement in his condition, and renders it quite certain that in a few years the well known advertisement will be posted, that a certain farm, "suitably divided" &c., &c., is "for sale."

The Messrs. Lynde have been famous for their excellent butter and cheese; and were formerly extensively and profitably engaged in the dairying business;—their sales in one of the last years of their operations in this line, amounting to 14,000 lbs. of cheese at 11 cts., delivered at the farm. Of late, owing to increasing years, &c., they have turned their attention mostly to the stall-feeding of cattle, thus consuming the most of their products upon the farm. Mr. Barnard Lynde informed me that he had paid toll, the past winter, for about 600 bushels of grain, which he had fed out in this way.

MANUFACTURE OF MANURE.—Every material upon the farm, valuable in the manufacture of manure, is brought into requisition. Mr. John Lynde has not been able to avail himself of the advantage of a barn cellar hitherto, on account of rocks below the surface; but I believe it is his intention to alter the arrangement of his buildings so as to obviate this difficulty. His practice, therefore, has been to throw in muck, under the stable floors, to the depth of three feet, in the fall, and then in the spring it is taken out and mingled with his other compost. His yards are well covered in the fall with muck, turf, &c., and in the spring the contents are piled up, mostly under cover, remaining in this condition until the next fall, when the compost is carted out and spread as a top-dressing on moist grass ground. His arrangements for the swine are excellent, and afford a large quantity of manure.

Mr. Barnard Lynde has been more successful in obtaining a cellar. Two years since, he commenced digging for one, and opened a trench about 14 feet wide and 8 feet deep, under the whole length of the barn, (70 feet.) The earth taken out was all carted to the field and spread as a top-dressing upon a moist piece of mowing. The effect was truly wonderful,—doubling the quantity of hay. One would not have supposed that earth taken out, to the depth of 8 feet, would have produced this effect; and it certainly affords substantial proof of the benefit to be derived from barn-cellars, where the salts are annually saved and made available. The earth under this barn is remarkably free from stone, and as the cellar never is affected by frost, it is Mr. Lynde's intention to keep widening it, annually, from time to time, in the winter, by throwing the earth back on to the manure, in about equal quantities with it, until the whole is excavated. Stone posts are set under the timbers of the barn at suitable distances, so as to make all safe. He is thus provided with material, ready at hand, for compost, for some time to come, and the application of it so far, in every form, has produced highly satisfactory results. The contents of the cellar remain there until after haying, and then, at convenience, the mass is carted out into large and compact heaps, for the next spring's use.

The barn-yard is covered a foot deep with muck, sods, &c., in the fall, and after the hurry of spring is over, the contents are snugly piled, under cover, and in the fall carted out and spread as a top-dressing on the moist mowing land.

My attention was directed to a corn-field which had been dressed with a compost of muck and animal matter. Two old horses were killed in the autumn, cut up into pieces of 15 to 20 pounds' weight, and mixed in compost with about 40 loads of muck. Upon each piece of horse-flesh a little slaked lime was sprinkled as it was laid on the heap, and soon after the work was completed, a powerful fermentation commenced; early in the spring the heap was overhauled, and the animal matter was so thoroughly decomposed, that hardly a bone, of the size of a man's hand, was found remaining. This compost was applied to about 1½ acre; and the field planted to corn, which promises now to yield a bountiful harvest.

Last season, ten or twelve stage-horses were taken in to winter. They were turned loose into a yard, with a large shed for shelter and a rack for feeding; and some 50 loads of muck were spread over the bottom to absorb their droppings. The contents of this place were piled up under the shed, in the spring, and it is now a black, free mass, of fine quality.

The horse-barn has a cellar under the whole of it, which receives the horse-manure and all the wash of the house, and into which muck, turf, &c., are thrown from time to time, and the whole is worked over by the hogs.

In these various ways, over 400 loads of manure have been made, which is now in a fine state of preservation for future use.—I have been thus particular in noticing the arrangement of these farmers for making manure, because in my estimation proper attention to this department is the very starting-post in all good farming, certainly in this region of country.

Field Cultivation.—About ten acres are broken up annually, on these farms, as deep as the plow can be made to run, heavily manured with compost and planted, one year to corn and potatoes, and the next year stocked to grass with spring grain. The compost is spread on top of the furrows and harrowed in. The crops of corn and of spring grain are always good, and in favorable seasons often very heavy. A large burden of hay is cut, filling the spacious barns completely.

A field of second crop clover particularly attracted my attention; and on inquiry, I found that it had been broken up in the fall, three years since, to the depth of 9 inches. The next spring, 40 loads of compost were spread on each acre and thoroughly harrowed in, and the whole planted to corn, the crop averaging 86 bushels per acre, by actual measurement. The next spring, 3 bushels of barley, with ½ bushel of herds-grass and 16 pounds of clover seed were sown on each acre. The crop of barley was fine, and this year the soil is completely filled with grass roots, not an inch of unoccupied space being visible, and the ground beautifully covered with the farmer's best carpet. The second crop is already fit for the scythe, and will turn out a very heavy swath.

The Messrs. Lynde are of opinion that true economy consists in sowing grass-seeds *broadcast*, with a liberal hand; and as their land is thoroughly prepared to receive it, they in return harvest fine crops, both in quantity and quality. They are partial to the use of southern clover, as an ameliator of the soil, and estimate it highly as food for cattle, if sown thickly and properly cut and cured. They were formerly in the habit of fall-feeding their mowings, but of late years have abandoned the practice; believing the cattle's feet to be more injurious than their mouths—particularly on the more recently seeded fields.

Management of Wet Land.—Considerable attention is now being paid to the improvement of their wet lands, of which they have a number of acres, the surface being quite broken into small knolls and hollows. These are levelled down smooth and the land diched and drained of superabundant moisture. The field is next planted to some hoed crop until subdued, and then laid down to grass, with a heavy seeding of herds-grass and red-top, designing to keep it in permanent mowing, by liberal top-dressings of compost. They are of opinion that this description of land may be made very productive and profitable by such cultivation.

Feeding and care of Stock.—None but the very best of animals are kept on these farms, and the same liberality is extended to them in feeding, that the land receives in manuring. "Do well whatsoever is done," is a favorite maxim with these farmers. In consequence of this system of feeding, their two-year-old cattle are as heavy as ordinary cattle at three years old. Their working oxen are sleek and well conditioned, requiring to be fed but a short time to fit them for the shambles. Their milch cows are the best the section affords, and are well cared for, both summer and winter; and, in short, no animal is suffered to lose ground, or to remain stationary that is susceptible of further improvement. Doubtless this is the true course, and we find fully realised in the practices of these gentlemen, the doctrine so often enforced of cultivating no more acres than can be well manured, and keeping no more stock than can be made constantly to improve. In either case, if the acres begin to deteriorate in produce, the profits of labor are at once diminished; or if the stock begins to fall away, or, if growing stock, even to remain stationary, the profit of feeding is at an end.

In closing this hurried communication, I have to remark, that these gentlemen have never been wedded to old customs, simply as such, but have ever been ready for substantial improvements; and probably a good share of their success as farmers, may be attributed to the fact that, for many years, they have been intelligent and constant readers of one or more agricultural publications. Indeed, the intelligent observer, in travelling past these farms, would not need to be told of this fact; he would recognize it at once, by unmistakable, general appearances.

F. Holbrook.

Brattleboro', August 14, 1848.

Trench Plowing.

There has been much said from time to time about trench plowing. I have never known it to succeed to any great extent. If attempted in the summer in stiff soil, it cannot be done—the labor and expense is too great. The only proper time to trench-plow is late in the fall, when the ground is saturated with water. But I think there is no need of a trench-plow. Three good horses to a good three-horse plow will be able to turn a furrow twelve inches deep. This is the true plan to commence on. The stiff clay sub-soil, thrown up to the action of frost, is broken down, and by being thoroughly mixed, next summer, by frequent plowings, a deep soil, well fitted for the nourishment of plants, is secured. But it must in no case be plowed in summer when wet. All lands inclining to be wet, are greatly benefitted by being plowed very deep late in the fall.
Wm. Todd. *Utica Mills, Md., August,* 1848.

India-Rubber Boat.—In page 293 of your last number, an inquiry was made if boats are ever constructed of India rubber. Col. Fremont, in his expedition to the Rocky Mountains, in 1842, had one, as also in his expedition to Oregon and North California, (vide Doc. No 166 of the H. of R.) In the first expedition of 1842, the seams of the Boat were sown together, but the last, being fitted out in a hurry, the seams were pasted, but still it lived amid the storms and tempests of the Salt Lake, and the numerous eddies, rapids and waterfalls of the rivers. He says it swam like a swan upon the mountain billows of the lakes, and floated uninjured on the tempestuous torrents of the river. It could be transported with ease by land, and bore heavy weights. Life boats are made of this material, and the Gutta Percha may be used instead of caoutchouc. James Boyle, *Annapolis, Oct.*, 1848.

BUTTER-MAKING IN HOLLAND.

Editors Cultivator—As I had some dairy-farming experience in Holland, and was for a number of years manager of an extensive farm where butter was made, in the Northern part of that country, where the best article for market is produced, I thought it not unfit to give your readers a description of the way the "Hollanders" make butter, which often keeps one year or more.

We milked from 40 to 60 cows, of a breed called "Lakeveldsche," after their originator. This breed of cattle was obtained like the Bakewell sheep, by scrupulously breeding the best animals, till the highest point of perfection for the dairy was obtained. They are invariably white, with a black, cloth-like spot on the back, and down the sides; their size is equal to the Durham cows I have seen in America. The milk of these cows is generally very rich, although one animal will differ sometimes largely from another in this respect. They sell commonly for 80 guilders, ($32) each. I have often paid as high as 150 guilders for an extra milker.

Although these animals are always highly fed and well kept in all seasons, they are constantly poor while they are milked; this is one of their best qualities, as they turn everything into milk.

We took from 18 to 8 quarts of milk a day throughout the year, according to season; the highest point, and the best milk is obtained in April and the beginning of May, when the cattle get the new clover and grass. At that period, the butter is of the finest possible flavor and sells, made up in fancy figures and adorned with the first flowers of spring,

> "Whose colors quaint
> Have diaper'd the meadows o'er,"

for 50 and 40 cents (American currency,) the pound. The average price North Holland butter commands, from wholesale dealers, throughout the year, is 15 cts. per pound, American currency.

Our cows were always fed in the stable, and turned out in an open yard twice a day for exercise, and to cleanse their places by a liberal application of water and broom rubbing, of which last two articles, the Dutch dairyman is most lavish, no filth nor litter being ever allowed to remain in the stable at the time of milking.

The whole secret of making such superior, and long keeping high-flavored butter, is, according to my observation, only to be found in the most minute cleanliness in the manipulation generally, and in the utmost nicety in the keeping of the milk, cream, vessels and apartments, joined to plenty of white (Dutch) clover, and the use of salt, obtained by the evaporation of sea water.

Every morning before sunrise, the cows were fed and turned out, the dung and all filth removed, and the doors and windows opened. After airing the stable, they were placed back again, and milked, the milk, taken to the dairy-maid, was placed in shallow earthen pans (glazed inside) which stood in a reservoir of cool water, purposely let in before every milking. In the course of the day she dipped off the cream, by the aid of a flat hollow wooden dish, as often as it rose to the surface of the milk, which in no case is suffered to get sour before the cream is taken off. The cream was poured into large tubs, in the form of a Dutch churn, and stirred several times in the day. I should have stated that the night's milk was put in the pans in the same way, and skimmed off before the morning's milk was brought in; the cream of the last being added to that of the first, the whole was suffered to get sour together. If the cream did not turn sour by itself, it was caused to do so by adding some acid cream to the contents of the tubs.*

Churning was performed by horse-power, sometimes once a day and sometimes every other day, according to the fitness of the cream; the churn apparatus was so arranged that a regular motion of the dasher could be adapted to the season of the year. After the butter was separated it was taken out, by a strainer made of silver wire, and put in a brass tray, in which it was left to harden for a few hours, in the reservoir alluded to above. When hard enough to knead well, the buttermilk was *all* pressed out, not a particle visible to the eye being left, after which the dry butter was salted and the salt worked in. The hand, often dipped in ice-cold water, has hitherto performed the expulsion of the buttermilk. After the salt was added, only a wooden ladle, perfectly sweet, touched the butter, and the milk-like brine which is expressed under the operation of salting, is dried off by pressing clean linen towels on the butter.

The next operation is putting the butter down in the firkin; this is made of white oak (slightly different from the American white oak, it being closer-grained,) and when destined for a sea voyage or long keeping, only old firkins, which we collected for the purpose, were used, after the same were made sweet by scalding brine. The bottom of the vessel was sprinkled and the sides rubbed with pulverised salt, and the butter packed in such a manner that no cavities nor brine ever remained in or between the successive layers; the firkin being filled, a layer of salt was rubbed on the surface, and a clean sheet of white paper placed over the salt, while the nailing on of a hollow wooden dish, completed the article for market and for transportation to any part of the world.

It is incredible to any body who has not made close observations on the subject, how easily milk is changed by the temperature, and above all, how easily it is affected by the vessels wherein it is kept, as also, how much, almost *magical* influence, the personal cleanliness of the dairy-maid has, on the article of butter produced. Dairymen who have the same stock of cattle, the same stables, the same herbage, will not produce the same quality of butter, nor get the same price in market, because the production of the one is distinguished by a pleasant, yellow, inviting color and admirable flavor, while that of the other is depreciated by a whitish, cheesy-like appearance, indifferent taste, and sometimes flabby texture. Some people, owing to a peculiarity about their person, never can make butter that will keep for a long time.

It is a rule with the dairy-women of my country, never to put milk, cream or butter, twice in the same vessel, without scalding, airing, and if possible, sunning.

I have eaten butter of our own make, that had been sent among ship stores, passed the equator to the island of Java, and was brought back again perfectly sweet and fresh.

The cows, by the construction of the stable, were divided on both sides of a floor, 26 feet wide, with large doors for a wagon loaded with green herbage or hay to drive through; before and under the head of the cattle, where troughs built of brick, for their drink and food, with a pump so placed that the water, let in the troughs, could be drained off at the opposite end. Gutters were provided behind the cows, to receive the solid and liquid excrements, which by their own gravity, and finally by sweeping and cleaning, were conveyed to a cistern, where a compost was formed by admixture of mud out of the bottom of ditches, which in Holland divide the meadows and take the place of fences. This compost was carried out and scattered over the meadows in the spring, as soon as the water, of which I shall have occasion to speak directly, is drawn off.

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* We presume it is only the *first stage* of acidity that our correspondent alludes to. An *acrid* state of the cream would be injurious. Eds.

Meadows and pastures in Holland, are situated on what is called "*Polders*;" a polder is a surface of level land, measuring from 20 to 4 miles square, and not unfrequently 20 or 30 feet below the adjoining river, which glides in rapid motion along the embankments that protect the land forcibly against the intrusion of its boisterous waters. These embankments called "*dykes*," are kept in good repair by the joint contributions of the different owners of the polder. Rain-water is worked out by stationary windmills, also the joint property of the owners, (called "Ingelanders;") in fall and winter the rain-water is suffered to accumulate and innundate the lands, which then frequently present the appearance of a large lake. This is done in order to kill noxious weeds, and give the soil the benefit of irrigation. In March or February the water is pumped off, and the manure put on as before described. In this manner land is made to produce an abundance of fresh herbage, consisting principally of white clover, from April till September, or the same is cut twice, and made into excellent hay for winter forage, without even breaking the sod or using a plow.

The Dutch dairyman never produces grain, not even for his own consumption; his whole attention is undividedly applied to making, in the best possible style, the article for which he is so justly celebrated.

If my countrymen could be made to believe that America had such an extensive command of cheap land, adapted for the dairy business, joined to an unlimited home market for the article, they certainly would escape from the feudal vexations under which they now suffer, and, like me, seek refuge in the land where Liberty holds the sceptre, and where every one can enjoy the reward of his honest labor, without being compelled, as they are, to give up one half of their hard earnings to a reckless, profligate and squandering government.

I would add, that the land on which I am located is well adapted for dairy-farming, the clover and grass springing up spontaneously, after clearing; the climate is, by the elevation, (1,000 feet above the Tennessee river,) temperate; my thermometer last summer never rose above 94° in the sun, while that instrument generally ranged between 60° and 70° in the shade. The facilities by which butter can be sent fresh to the southern markets, Charleston, Savannah, Augusta, &c., secure a ready sale to any body who wants to undertake the making of it in this region.

Land can be bought here for $1.25 an acre. I bought mine from Nicholas Haight of New-York, who, I suppose would give all necessary information about the same. ALB. C. RICHARD.

Walden's Ridge, Hamilton Co., Tenn., June 26.

PRINCIPLES OF BREEDING.

It is generally admitted that there are two modes or systems of improving domestic animals; viz., 1, crossing different varieties and afterwards breeding from the produce; and 2, selecting animals for propagation entirely from one breed. But within a few years, considerable controversy has arisen in regard to these two modes of breeding, and, as often happens where discussions are carried on with warmth, the parties have in many instances urged their arguments to extremes. On the one hand it has been held that crossing is the only safe course of breeding, while on the other it has been denied that any *real improvement* is ever effected in that way.

We do not advocate, exclusively, either mode, being convinced that each has its peculiar advantages under different circumstances, and if judiciously pursued will be productive of improvement. The most essential point is the same in both systems—that is, a proper selection of breeders. As was remarked by Prof. SIMMONDS, in his lecture before the Royal Agricultural Society, (noticed in our September number,)—"Every improvement of breed requires the application of the same means to retain it which produced it; the chief of these is *care in the selection* of stock, so as to avoid a tendency to hereditary disease [or defects.] Crossing is founded on a principle just as secure as Bakewell's system of care in selection, added to the in-and-in system."

The great breeder above referred to, (BAKEWELL,) evidently combined the system of crossing with that of breeding from one stock; for his breeding animals were in the first place selected from different breeds, but after the cross had been carried to the desired point, he confined his selections to his own herds or flocks. He formed in his mind a standard of perfection for each kind of animals, and to this he constantly endeavored to bring them. That he was eminently successful in the attainment of his object, cannot be denied.

But it has been said that "it cost BAKEWELL the labor of a lifetime and a large fortune to establish a single breed of sheep." If this were true, it might be replied—if his improvements could only be obtained at such "cost," it was time and money well spent. But is the assertion correct? The language implies that he accomplished nothing else in his "lifetime" but the improvement of "a single breed of sheep," and that in effecting this he spent "a large fortune"—both which statements we think are erroneous. His improvements in animals were not confined to sheep, but extended to horses, cattle and swine; in all which he produced stock superior to any of his time, and for their several purposes it is probable they have never been surpassed. "He was allowed," says his biographer, "to be the first breeder of horses of the age in which he flourished. * * * The different nations of Europe supplied him with *materiel*, and Nature herself might have wondered at the skill he displayed in bringing her works to a greater degree of perfection."[*] In practical agriculture, his improvements were scarcely less remarkable, and it has been said, that "no man, perhaps, during the last century, did so much towards increasing the agricultural interests of the country, as BAKEWELL." "He was in advance of the age, and we may say full half a century before any of his neighbors. ⁂ Dishley, [the name of his farm,] was in fact a school of *practical agricultural reform*."[†]

The expenditure of his "large fortune," does not appear to have resulted from his efforts to improve his breed of sheep, or from prosecuting his other operations; but, according to the authority we have referred to, his embarrassments arose principally from another source. From the distinction he acquired, his house became the resort of great numbers of visitors from various parts of the world. His expenses were great, as "his hospitality was unlimited." "Several of the principal of the nobility were frequently his guests, and Mr. BAKEWELL, whose disposition was as liberal as his mind was noble, entertained them in the same expensive style as they were accustomed to live in themselves when at home."

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[*] *Farmer's Magazine*, second series, vol. vi, p. 82.

[†] Ibid p. 84.

That it required a length of time to fix and establish the improvements which BAKEWELL made in sheep and other animals is admitted; but considering the nature of the work, it has been well remarked, that the time he took to accomplish it, "*was incredibly short.*" He began his farming operations about 1750. At what period he commenced the improvement of sheep, we are not exactly informed. It is said that in 1760 his rams did not sell for more than two or three guineas per head. From this time he gradually advanced in terms, and in 1770 he let some for twenty-five guineas a head for the season. MARSHALL states that in 1786 BAKEWELL let *two-thirds* of a ram, (reserving a third for himself,) to two breeders, for a hundred guineas each, the entire services of the ram being rated at three hundred guineas the season. It is also stated that he made that year by letting rams, more than one thousand pounds.

In 1789 he made twelve hundred guineas by three "ram-brothers," and two thousand guineas from seven, and from his whole letting, "full three thousand guineas." Six or seven other breeders made from five hundred to a thousand guineas each, and the whole amount of ram-letting of BAKEWELL's breed is said to have been not less, that year, than *ten thousand pounds*.

We presume it will not be doubted that this breed of sheep was "*established*," in public opinion, at the time these prices were obtained. BAKEWELL died in 1795, at the age of 69.

It is true that still more extraordinary prices were obtained for the use of rams of this breed after BAKEWELL's death. PITT, in his "*Survey of Leicestershire*," mentions that in 1795, Mr. ASTLEY gave three hundred guineas for the use of a ram of this breed, engaging at the same time, that he should serve *gratis* twenty ewes owned by the man of whom the ram was hired—making for the entire use of the ram that season, four hundred and twenty guineas. In 1796 Mr. ASTLEY gave for the use of the same ram, three hundred guineas, and took forty ewes to be served gratis. At the price charged for the service of the ram to each ewe, the whole value for the season was five hundred guineas. He served one hundred ewes. In 1797 the same ram was let to another person at three hundred guineas, and twenty ewes sent with him—the serving of which was reckoned at a hundred guineas, and the ram was restricted to sixty more; which brought his value for the season to four hundred guineas. Thus the ram made in three seasons, the enormous sum of *thirteen hundred guineas*.

We have nothing to do, at present, with the question whether the value of these animals was not exaggerated. The actual superiority of the breed over the stock of the country, must have been obvious, and this point we wish kept in mind.

This breed of sheep is continued to the present day, and it has been remarked by a respected writer, that they will "remain a lasting monument of BAKEWELL's skill." As to their origin, the testimony shows them to have been of *mixed blood;* though no breed is more distinct in its characters, or transmits its qualities with more certainty; and if we were without any other example of successful crossing, the advocates of the system might still point triumphantly to the Leicester or Bakewell sheep.

But what are the opinions of our best modern breeders in regard to the practicability of producing distinct breeds by crossing? ROBERT SMITH, of Burley, Rutlandshire, an eminent sheep-breeder, in an essay on the "Breeding and Management of Sheep," for which he received a prize from the Royal Agricultural Society, (1847,) makes the following remarks:—"The crossing of pure breeds has been a subject of great interest amongst every class of breeders. While all agree that the first cross may be attended with good results, there exists a diversity of opinion upon the future movements, or putting the crosses together. Having tried experiments, (and I am now pursuing them for confirmation,) in every way possible, I do not hesitate to express my opinion, that by proper and judicious crossing through several generations, a most valuable breed of sheep may be raised and established; in support of which I may mention the career of the celebrated BAKEWELL, who raised a *new* variety from other long-wooled breeds by dint of perseverance and propagation, and which have subsequently corrected all other long-wooled breeds.

We might cite other evidence to show that BAKEWELL derived the originals of his flock from various breeds; but for our present purpose, it is not necessary to enter more into this part of the subject.

It will be admitted that the general principles which govern the propagation of animals are the same in all races, and, therefore, a system that has produced the improvement of one species may, of course be relied on for others. The writer by no means advocates indiscriminate crossing; to become a good breeder, by the practice of any system, requires a degree of judgment and skill in the selection and management of animals, rarely attained; and hence it results that of the many attempts which are made for the improvement of stock, few, comparatively are successful, and many are productive of injury rather than benefit.

But as new breeds have originated by crossing, in almost every species of domestic animals, a brief notice of some of them may be useful. We will begin with horses.

The Arabian breed, the most eminent in the world, and the acknowledged source of improvement in most other existing breeds, was in its origin, according to Col. CHARLES HAMILTON SMITH, (see *Naturalists Library*,) "*a race of great intermixture.*" The English Race-horse is admitted to have been derived from a mixture of the blood of the Turk, Barb, Arab, Persian and Spanish, with more or less of the ancient British stock. (See LOW, YOUATT and SMITH.) The Hunters, says LOW, "have been mixed not only with one another, but with every other race which seemed fitted to give the conformation and characters required. The horses of Spain, Italy, and Turkey, nay of Barbary and Arabia, have been resorted to." The Suffolk Punch, according to the authorities above quoted, was descended from a cross of the Norman stallion and Suffolk cart mare. The Clydesdale breed is said to have originated from a cross with stallions brought from Flanders and the best Lanark mares. The Andalusian, (the parents of the celebrated *canalos* of California.) were derived from a mixture of the Barbary and Spanish blood; and the highly esteemed Norman, is a cross from the Andalusian with the old Norman draught horse.

All these may be claimed as examples of the good results of judicious crossing in horses, and yet the proposition to preserve some valuable stocks which originated in a similar way, has been discouraged, on the supposition that breeding them together "would be only insuring uniformity of defects, and making them, in the end, utterly worthless"!

Among sheep, of breeds that may be called artificial, besides the Leicester, (originated by BAKEWELL, as before shown from a mixture of several long-wooled breeds,) we have the Cotswolds, which are a cross of the Leicester and old Cotswold, and a sub-variety of the Cotswold called the Improved Oxfordshire, which have arisen within a few years chiefly through the agency of Mr. LARGE, of Broadwell, Oxfordshire. The celebrated Cheviot breed of Scotland is a mixture of the Leicester with the old Cheviot stock. Some experiments are now going on in England, in reference to crossing the South Downs and Hampshire Downs with the Leicesters and Cotswolds, and Mr. TWYNHAM and Mr. HILLIARD have flocks originated by crossing these breeds which have received many prizes and have been repeatedly commended in high terms. But as these may be considered not fully "established," we only mention them.

Of cattle, we have at least two esteemed breeds—the Durham or Improved Short-Horn, and the Ayrshire, which according to the most authentic accounts, were of mixed origin.

Of swine, it may be safely said that we have not a single variety of any value that was not derived from a mixture of breeds.

In dogs, the advantages of crossing have been not less remarkable than in the animals above mentioned. Several varieties now considered distinct were originally produced by intermixture. YOUATT, in his work entitled "*The Dog*," tells us that the Fox-hound is the old English hound "sufficiently crossed with the Greyhound to give him lightness and speed without impairing his scent." He tells us, also, that the Pointer "is evidently descended from the hound;" and that the Bull-Terrier is a cross between the Bull-dog and Terrier, and "is generally superior, both in appearance and value, to either of its progenitors."

A cross between the Bull-dog and Greyhound, of which he gives an account, deserves special notice. "Towards the close of the last century," says Mr. Y., "Lord Orford, a nobleman enthusiastically devoted to coursing, imagined, and rightly, that the greyhound of his day was deficient in courage and perseverance. He bethought himself how this could be best rectified, and he adopted a course which brought upon him much ridicule at the time, but ultimately redounded to his credit. He selected a bull-dog, one of the smooth, rat-tailed variety, and he crossed one of his greyhound bitches with him. He kept the female whelps, and crossed them with some of his fleetest dogs, and the consequence was, that after the sixth or seventh generation, there was not a vestige left of the form of the bull-dog, but his courage and his indomitable perseverance remained; and having once started after his game, he did not relinquish it until he fell exhausted, or perhaps died. This cross is now almost universally adopted. It is one of the secrets in the breeding of the greyhound."

Mr. YOUATT goes on to relate the exploits of a celebrated bitch of this breed called Czarina, which won forty-seven matches and was never beaten.[*] This same bitch commenced breeding in the thirteenth year of her age, and two of her progeny, Claret and Young Czarina challenged the whole kingdom and won their matches. Most of their progeny proved very fleet, some of them sold for a hundred guineas each, and their blood it is said, "can now be traced in almost every good dog in the kingdom."

Of poultry, it is well known that several of the most noted varieties originated from crosses. Even the Dorking fowl, which by some advocates of "*pure*" breeding has been held in great estimation, was, many years ago, pronounced by ARTHUR YOUNG, "*a bastard breed*,"[*] produced by a cross of the Malay and Poland or Hamburgh fowl.

We trust our remarks will not be misunderstood; our main object has been to show that certain breeds of animals have been produced by crossing. Other breeds—such as the Devon, Hereford, Galloway and West Highland cattle, and the South Down and Merino sheep have been improved without any foreign admixture. The expediency of crossing must be determined by circumstances; the breeder's course must be adapted to the materials at his command. Where animals of the desired form and properties can be found in the same breed, we should decidedly choose them for propagation in preference to introducing alien blood. But the breeder should have a distinct and definite object in view, he should carefully consider the means of attaining it; and with the requisite facilities, his succes will be proportionate to his judgment and attention.

THE KERRY BREED OF COWS.—I here give an account of the Kerry cows, as far as a short experience of the qualities of four of that breed, and the accounts I had previously heard of them, justifies me in offering an opinion. The yield of milk I consider to be quite equal in quality and quantity to that of an average Alderney, which sort I have kept, and the Kerry possesses several advantages over that breed. In the first place a Kerry is very much cheaper to buy; secondly, it is much cheaper to keep, and with less risk, being much hardier in constitution, and capable of thriving on rough and scanty pasturage; thirdly, the meat is very much better, as the carcase of an old Alderney is little more than skin and bone; fourthly, the calf, if by a bull of a larger breed, such as a short-horn, is equal in size to that of an Alderney.—*English Farmer's Herald.*

COMPOST SHEDS.—Among the objects most worthy of our agriculturists' attention, are compost sheds; a cemented pit, roofed in, with walls on three sides. In this kind of shed manure may be economically manufactured, with as much industry and care as on a Flemish farm. These kinds of sheds are kept constantly filled with vegetable and animal refuse of all kinds, amongst which is mixed from time to time a bag of guano, to promote the decomposing fermentation; with the aid of liquid manure the mass is very soon converted into a highly exciting compost, and conveyed away either for immediate application, or to be preserved in a casing of soil, if no crop or ground be ready to receive it. Thus the manufacture is constantly going on, and guano, the most costly of imported fertilizers, is made to multiply its own peculiar properties to an incalculable amount.—*Ib.*

TOP-DRESSING FOR GRASS-LANDS.—Bones dissolved in muriatic acid, will be a good top-dressing for grass-lands. Boiled will be more easily dissolved than raw bones. They must be put in a vessel, wetted till they will take up no more water, and then have the acid poured over them.—*Ib.*

THE FRUIT TRADE.—The Patent Office Report for 1847, states that the quantity of apples shipped from Oneida county, N. Y., (chiefly from four townships,) was ten thousand barrels in 1845, seven or eight thousand in 1846; and eighteen thousand in 1847. The most productive orchard, known as the Goodsell orchard, containing about six acres, yielded in 1845 more than one thousand barrels, which sold for over a thousand dollars.

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[*] Lord Orford was so enthusiastically fond of coursing, that he insisted contrary to the wishes of his friends, on riding out to witness the performance of his favorite bitch, though he was at the the time seriously ill. She won the stakes; but in the excitement and exultation at the moment of victory, Lord O. fell from his horse and almost immediately expired.

[*] "Survey of Sussex."

THE POTATO DISEASE, &c.

EDITORS CULTIVATOR—I am sorry to announce to you the undoubted existence of the "Potato Disease" among us. I have been confidently looking for its appearance for some days past, as we have had, since the 30th of May, precisely those alternations of weather which have invariably accompanied it in former years. From May 30th to June 9th, (with the exception of warm showery weather on the 3d and 5th,) the weather was almost constantly cold and drizzly. During this period (June 1st,) we had a slight touch of frost. From June 11th to 13th, inclusive, the weather was very bad, the thermometer sinking just to freezing point at night on the 13th, and the days exhibiting a dry lacerating chilly wind, that injured all tender plants very much.

From the 15th to the 19th we had five very warm days. followed, on the last day, by copious rain. On the 23d and 24th, the wind was so rough and cold as to make it necessary to cover melons, &c., wherever it was possible. This was succeeded suddenly by hot weather on the 26th and 27th.

Lastly, from July 4th to 10th, we had one continued chill, making it necessary to cover tender plants, such as melons and cucumbers, as much as in the month of May. The difference in the weather between this and the years '44, '46 and '47, when the potato disease prevailed so extensively, has been, that the changes have been much more numerous than in those years, but not quite so severe. The thermometer has not usually sunk so low, nor the wind been so lacerating to vegetation. Especially the severe chills that occurred from the 11th to the 15th of July, 1846; and again from the 11th to 21st of June, and from the 24th of July to the 3rd of August, 1847, (all of which preceded periods of potato disease,) were more severe than those of the present year.

The morbid indications on the potato now first, just becoming visible, are three: a steel blue coloring on the points of some of the upper leaves,—a rusty look on those that are lower and central in the hill, together with a single withered leaf on the apex of the plant, especially of such spires as exhibit no blossoms. This withered leaf, together with the others exhibiting morbid indication, speedily become dry.

As the depression of the temperature has not been so low, nor continued for so long a time as in former years, when the potato was diseased, so I hope the morbid appearance will not increase rapidly, but gradually yield, under mild steady weather, until a healthy action is restored to the system of the plant.

If such should be the result, the potato will live out its natural life, or nearly so; and on digging in the autumn, we shall discover only occasional traces of disease on the tubers. *Nothing is more evident to careful observers of the progress of this disease, than the fact that it does not originate locally in the tuber, but is the result of morbid secretions in the plant itself; and that hence, in point of time, the disease of the tuber follows that of the herbage.* Should it be asserted that disease has sometimes been known to succeed hot showery weather, (as is probably the fact,) when none of the foregoing morbid indications appeared, still the existence of a morbid condition of the secretions of the plant is then just as undoubted.

The *mode* by which severities of weather produce this disease is, I think, obvious. The brightness and warmth of our summers, approach very near to those of the tropics. Hence all those tropical and semi-tropical plants that mature their fruits in from 12 to 20 weeks, and do not require the highest heats of these regions, may be raised here with tolerable success, in an ordinary season. Melons, cucumbers, squashes, pumpkins, corn, beans, egg-plants, tomatoes and potatoes, are all of this class. The potato being moreover a native of the *mountains* of the tropical regions, presents itself among us already, by that fact, half acclimated.

Now, soil being left out of the account, the first requisition, in this whole class of plants, is *heat* and *light;* just as *air* and *moisture* are to our hardy ones, such as cabbage, turneps, the grasses, and the grains.

The Potato, however, requires less heat and more moisture than any other tender plant we cultivate, and so presents points of similarity to our half hardy ones.

While this class of plants enjoy steady warm and bright weather, they are sure to grow with any tolerable culture. But let sudden changes occur; as that of high and dry heats succeeded by long and damp chills, and the deprivation of their nutrimental juices is inevitable. This, attended with the laceration of foliage by the wind, and the sudden return of warm weather, producing a ruinous perspiration from the foliage before the earth is warm enough adequately to restore the circulation of the plant, finishes the work of death. Any or all these causes occurring in mitigated forms and degrees, produce proportional results of unfruitfulness and disease. In such ways the vital force of the plant yields to the stronger influence of chemical action.

Had those who have speculated on the causes of the potato disease cultivated the small list of tropical plants noticed above, though but for a single unfavorable season, side by side; and had they at the same time, heeded the well ascertained physiological laws of tender plants, they would, I think, have come unanimously to this single and simple conclusion, *that all tropical plants cultivated here, suffer usually and mainly from infelicities of weather, especially damp chills; and that the morbid indications in this whole class of plants are as nearly the same as the difference of foliage and fruit will permit.* Hence I would as soon talk of *Tomato*, or *Melon*, as of *Potato* disease. The only peculiarity in regard to the potato, is the recency of its marked liability to disease. Indeed, such are the unalterable laws of vegetable physiology, that had we a minute history of the potato, as cultivated a century ago in our own land, we should, I doubt not, find frequent slight traces at least of its present morbid manifestation.

But I did not intend now to write an essay on this subject. Let those who would see the illustration and proof of the foregoing positions consult a treatise on the subject, contained in the "Transactions of the New-York State Agricultural Society, for 1847," now just published.

July 22nd. The indications of disease on the herbage of the potato, is now everywhere apparent; although its progress has been much less rapid than in 1846, or the second attack in 1847. On the day of the preceding date, (July 14th,) we had a shower of rain followed by chills and wind of considerable severity and continuance, so that I feared they would enhance the morbid tendencies pre-existing.

August 8th. Under the last preceding date, we enjoyed a fine warm rain succeeded by cool, but not cold weather. Under its influence, the influence of disease seems clearly lessened; while those leaves that had become steel blue or rusty, are dying; the others look healthful.

I have planted about three acres of potatoes on a gravelly loam, a little richer than was desirable, as it has induced too great rankness of herbage. It is here, I conceive, that my principle danger of disease lies.

The field had been a pasture for some years. It was turned over by the plow last November. My seed was planted from April 28th to May 2nd, inclusive. The seed was put in between the furrows with a grub hoe, from 4 to 6 inches deep, and the whole field immediately harrowed both ways. I have hoed it twice, making no hill at all, but leaving the ground clean and mellow about the plant.

The whole field appears now as though moderately hilled, from the upheaving of the soil during the formation of the tubers. I have found no trouble from my potatoes rising out of the ground as my nieghbors feared.

In cases of the rapid progress of disease, I have formerly mowed off my vines to prevent the transmission of morbid matter formed and forming in the herbage, to the tuber. But the disease has advanced so slowly this year, that I have not done this. My varieties are all early, but the process of maturity has undoubtedly been a little hastened by diseased tendencies.

August 11th. Have just discovered a slight discoloration on two or three tubers, enough to warn me of the possible rapid approach of others in the rear. The drying up of my potatoes, is evidently in steady, though not rapid process.

The Newburgh Experiment on the Potato.

In the New-York Spectator for July 3rd, I see the notice of an experiment on the potato, communicated to the Executive Committee of the State Agricultural Society, at its recent meeting at Buffalo.

In that experiment, potatoes were planted in a very deep rich soil, in a forcing house, kept at as even a temperature as possible, without the use of artificial heat. Yet when the potatoes were dug, about three weeks before, (that is, as we may calculate, about the 1st of June,) they exhibited signs of disease. Hence the inference is drawn *that sudden alternations of temperature, or varying conditions of moisture, have no agency in the production of this disease.*

But let us see.

1st. The cultivator shut up a mountain tropical plant in the necessarily *close air* of a green house. This was probably done about the 1st of March. The plant therefore, could have had but very little fresh air during the first two months of its growth.

2nd. He planted it in *a very deep rich soil*—a soil in which every familiar cultivator of the potato knows it will not do well, since it will scarcely form tubers at all.

3d. He planted a vegetable accustomed to a cool mountain air, in the necessarily *hot atmosphere* of a green house. In such a house, the temperature would almost unavoidably, in cold and bright days in the months of March and April, run up to 100°. These circumstances—a close air, rich soil,—and hot atmosphere—are the very predicament in which tropical plants are most likely to suffer.

Altogether, I consider the experiment a most unfortunate one, and the inference drawn from it as a perfect *non sequitur*. I am not practically acquainted with the management of *forcing houses*, either with or without artificial heat; but I have cultivated *hot and cold beds*, for the last fifteen years, and a part of the time, almost by the acre; and I have yet to learn that any plant that will admit of cultivation at all in our atmosphere, can be carried through its whole progress to maturity as healthfully when thus protected as when it is permitted the enjoyment of open culture through at least a part of its course.

The physiology of the potato disease, whether viewed in relation to this single species, or to the whole class of tropical and semi-tropical plants, seems to me not to present any profound questions or inscrutible phenomena. The *recency* of its seizure on the potato is the most difficult question, and that I think is satisfactorily discussed and referred to exhausted energy in the essay just referred to.

Diseased indications in other, especially tender plants—the Season, &c.—The months of July, and of August thus far, have been very similar to that of August, 1847. The coolness, dampness and darkness have been without a parallel in some years. The season has been exceedingly like that of the north of Europe, so far as I know it descriptively.

The temperature has ranged during the day from 55° to 75° (rarely 80°) and during the night from 50° to 60°. The consequence is, that the aspect of autumn shows itself prematurely; nor do I believe that any degree or continuance of good weather will restore the aspect of nature to its wonted appearance at this season of the year.

1. Hardy Plants.

Asparagus, Spinach and Pie-plant have been abundant.

Onions have suffered somewhat from a cool midsummer, the bulbs exhibiting a tardiness in forming.

Parsneps and *Peas* have done well, the last showing little tendency to decayed pods as formerly when potato disease existed.

2. Half hardy Plants.

Beets are good.

Cauliflowers started well and formed some fine heads, but now scatter badly, considering the coolness of the weather.

Cabbage, Early, has been unusually good,—a little more injured by insects than formerly.

Cabbage, Late, has done well with me, but in my neighborhood has suffered severely and extensively from the formation of turnep-shaped appendages on the roots.

Carrots, Lettuce, Radishes and Turneps, have done well.

3. Tender Plants.

These have all been backward in growth, but especially in fruiting, except in cases of extraordinary protection from the coolness of the summer.

It is well known to the cultivators of tropical fruits and plants in this climate, that in cool and unpropitious seasons, their blossoms either do not fructify at all, or if they do, that the fruit drops off prematurely. Thus it was through the whole month of August, in 1847, and thus it has been during the present season.

Beans, Bush.—These have rusted badly in the foliage, but less than in 1846 in the fruit.

Corn, that was planted early in deep warm soil, has sustained its verdure and continued its growth notwithstanding summer chills. It has thus illustrated the law that vegetation that is deep rooted, and that has mostly formed its tissues, stands cold weather much better than that which has done neither.

But early corn exhibits ears few and small.

Cucumbers.—This is the hardiest of all those vines usually planted in the garden, and especially in the power of its herbage to live through damp and chilly weather, and to fruit under similar circumstances. But it commenced fruiting late; and specimens marked for seed early in July, were ruined by the long continued chill that immediately followed; while the younger crop of fruit then gathering, became stunted, pale and bitter and so unfit for market.

Egg Plant.—My plants were moderately early. A few flowers fruited during a few auspicious days in July; otherwise the whole usual season of fruiting, thus far, has been too cold for that delicate process.

So it was in 1847. Plants that did not fruit before the 24th of July, did not fruit at all, although the herbage was large and fine. A large portion of the fruit of this crop rotted in 1846, in exact coincidence of time and appearance with the potato disease.

Green Fleshed Melons.—The foliage of this vine has suffered less than in 1846 and '7, in consequence of the higher range of temperature during a chill, and the less violent character of the wind; but the process of fruiting has suffered much more than in these years from the almost uninterrupted continuance of cool weather. A few fruits set late in June, but scarcely any since, until within these last few days. So it was last year during the whole month of August. A few gentlemen about me who have melon beds in highly sheltered situations, especially such as enjoyed the aid of bottom heat arising from large compost heaps, have done better.

Water Melons.—This is the tenderest of all melons. Early plants that were forwarded in hotbeds, looked well to the end of June and set considerable fruit. But they are now nearly all dead, root and branch. A few cold bed plants transplanted with entire safety, are but just alive now, and without the aid of a long and warm autumn, must entirely fail as a crop.

Peppers.—These exhibit some fine fruit set early. Others are now just setting, but between these there are few that are intermediate.

Squashes, Summer.—This squash sets in unfavorable weather almost as freely as the cucumber, but in the *growth* of its fruit it is the tenderest of all vines. Almost all my early specimens perished by rotting at the extreme end, by becoming covered all over with small carious spots, or by becoming prematurely ripe and stinted. There is no more delicate exponent of good summer weather than the rapid and healthful growth of the fruit of the summer squash.

Squash, Winter.—This, though hardier than the preceding, will probably be a failing crop. I expect to see the fruit present in autumn, (as in 1846 and 1847,) small carious spots on its surface, gummy exudations of an offensive smell all over the skin, and (as would be expected) a tendency to early decay.

All this again is the result of sudden changes of the weather at critical periods in the growth of this plant.

Tomatoes.—I had about 700 hills that began to mature fruit about the middle of July. All the first ripe fruit for nearly the first ten days was unfit for market. By the 25th they were in fine bearing, when they suddenly received a most violent shock from cold weather, so that on the first of August nearly every hill was defoliated in the centre almost as badly as on the 10th of September ordinarily. My fear was that, in these circumstances, they would, as in some former years, die outright. But they now seem to be a little revived, so that they begin to throw out young shoots from the naked branches in the centre of the hill. The market gardeners have long been in the habit of importing a few early tomatoes, from the city of New-York. But never before have I seen the spectacle of the Utica market supplied with imported tomatoes almost to the middle of August.

5. HARDY FRUITS.

Apples are few this year generally.

Pears, with me abundant for my trees.

Plums—not one to be found.

Quinces, so far as we raise them at all, are abundant.

6. TENDER FRUITS.

Grapes.—Those that were covered during the winter are in fruit. The springs of 1847 and 1848, unlike those of many preceding years, exhibited no frosts sufficient to cut off grapes after the buds broke.

Peaches.—None.

I ought to observe that the preceding doleful account of the season, especially in regard to tender plants, requires some abatement on account of the unusually bleak exposition of my garden. But with this slight qualification, it will hold true of Oneida county generally for the present year.

It is important to compare the preceding morbid indications, in the culture of tender plants generally, with that of the potato particularly. From such a comparison, it will appear that *the state of weather that precedes the potato disease, simultaneously, similarly and usually equally, precedes a diseased condition in every other tender plant usually cultivated among us, the soil, time of planting, care in the culture, being substantially the same in each case.*

If such be the fact, how can we avoid the conviction that similar causes of disease, be they what they may, are in action in each case. C. E. G.

Utica, August, 1848.

Answers to Inquiries.

EARLY-CUT HAY.—"Does early-cut hay, when fed to cows, prevent or lessen their difficulties in calving or cleaning?" This question is asked by a correspondent at Clarendon, Vt., who states that for several years past, he has fed his cows in the winter on hay cut chiefly in the month of September. He states that the cows have generally been in good order in the spring, but that they have frequently had difficulty in calving. He has given them rye meal, which has proved useful; but beans, mixed with corn meal, and wet up together, have been most effective in causing the cows to cleanse well. In answer to the above question, we think most dairymen will agree that early cut hay is better for cows than that which is ripe. Hay from green grass, keeps the animal system in a more natural condition; it prevents that tendency to constipation of the bowels, which at the time of parturition is very likely to produce fever, and lead to the difficulties mentioned.

BED-BUGS.—"A SUBSCRIBER," Granby, Ct. To prevent these troublesome insects, use bedsteads that have no holes through them, and which screw together so tightly as to leave no cavities; use board slats instead of cords; and if there is any appearance of bugs, apply corrossive sublimate and cheap rum, whiskey, or alcohol, to the places where they are likely to lodge themselves. It may be applied with a feather, and once a week will answer. If the bugs come out of the wall or floor, set the bedstead where it cannot come in contact with the wall, and occasionally use the above solution around the bottom of the posts and on the floor where they stand.

SPECIMEN OF MUCK.—S. W., North Easton, N. Y. The muck, of which you sent a sample, would probably prove useful as a fertilizer on the soil you describe.

"ARGILLACEOUS EARTH."—S. W. The sample sent contains much sand, a little alumina, and a little iron—no lime. It might be of some service on a loose, sandy or gravelly soil.

EXTIRPATION OF COUCH OR QUACK GRASS.—S. W. Work the ground thoroughly when it is moderately dry. A spring-tooth horse-rake, with large teeth has been used for cleaning out the roots and gathering them into piles, with good effect.

BEST TIME FOR SETTING OUT AN ORCHARD.—S. W. In general, we should prefer spring; but if the ground is dry and not liable to be thrown by frost, fall planting does very well.

HORTICULTURAL DEPARTMENT.

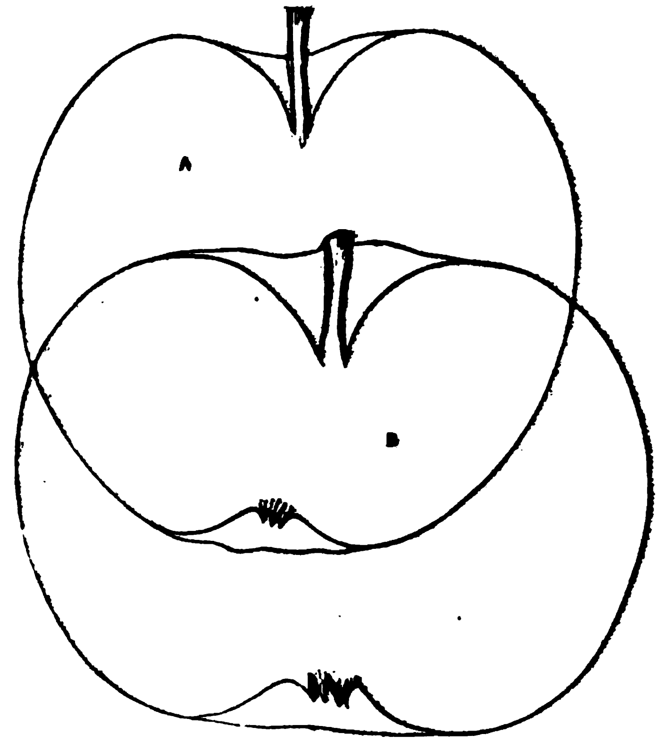
CONDUCTED BY J. J. THOMAS.

New & Newly Introduced Apples.

EARLY WINTER APPLES.

Mother.—A new, handsome late autumn and early winter apple, of the highest quality. It originated at Bolton, Worcester county, Mass. It is large, oblong-ovate, slightly approaching conical, obscurely and obtusely ribbed; surface a high, warm rich red on yellow ground, a deep red to the sun, in obscure streaks; stalk three-quarters of an inch long, in a moderate cavity; calyx in a small plated basin; flesh yellow, more so towards the outside, tender, moderately juicy, rich, very spicy, mild sub-acid or nearly neutral flavor, with some admixture of sweetness. This variety approaches somewhat in external aspect, the Esopus Spitzenburgh, and has the rich yellow flesh and spiciness of that celebrated fruit, but is far less acid.

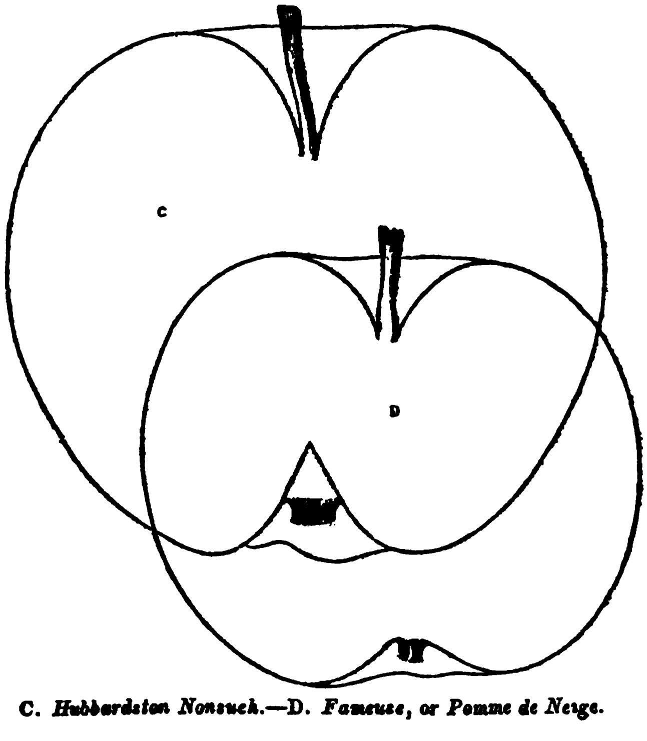
King Apple.—Cultivated in Cayuga and Tompkins counties, but not widely spread. Fruit large, roundish, flattened at ends, nearly regular; distinctly striped and dotted with a dark, rather dull red, on a yellow or greenish yellow ground, the whole color possessing a remarkably rich appearance; stalk from three-quarters to an inch long; calyx in a round, slightly waved, or nearly even basin: flesh yellow, remarkably tender, very rich, spicy, sub-acid, of first rate quality. Where known, it commands as high a price in market as any other apple of its season. Growth upright, vigorous.



A. *Mother.*—B. *King Apple.*

Hubbardston Nonsuch.—This apple, although it has been cultivated many years in Massachusetts, has not yet been extensively disseminated throughout the country. It is described by Manning, Kenrick, and Downing. It originated at Hubbardston, Mass.

Fruit rather large, roundish-ovate, tapering somewhat from the middle each way, nearly regular; skin marked with broken stripes and numerous dots of light yellowish red, on a rich yellow, or orange-yellow ground; stalk scarcely an inch long, in a moderate acute cavity; calyx in a ribbed basin; flesh yellowish white, compact, moderately fine grained, with a remarkably rich, slightly sub-acid flavor, with a strong mixture of a rich sweet. One of the first among first-rate apples—about equal to the Swaar as a winter table apple, and decidedly superior in flavor to the Baldwin.



C. *Hubbardston Nonsuch.*—D. *Fameuse, or Pomme de Neige.*

Fameuse, or *Pomme de Neige.*—Downing remarks that this is "a very celebrated Canada fruit, which has its name, (*Pomme de Neige*, or Snow apple,) from the snow-white color of its flesh, or, as some say, from the village whence it was first taken to England." Perhaps it may be regarded as strictly an autumn apple, although in northern latitudes, it keeps well into winter. It is known to a limited extent throughout the country.

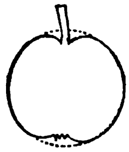
Fruit of medium size, sometimes rather small, round, even, and regular, rarely flattened at the end; color a fine deep clear red, with indistinct stripes on a whitish ground; stalk quite slender, three-quarters of an inch long; in a rather small cavity; calyx in a small, wrinkled basin; flesh remarkably white, often with faint streaks of red, breaking, juicy, very fine in texture, pleasant, slightly spicy, sub-acid flavor. Distinguished for its pleasant and agreeable qualities more than for its richness. First rate.

Analysis of the Forms of Pears.

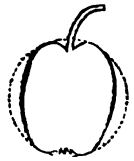
The second number of that splendid and valuable work, the Transactions of the Massachusetts Horticultural Society, contains a very interesting and valuable paper, consisting chiefly of figures, on the "Analysis of the Forms of Pears." We have taken the liberty, however, in one essential instance, to change the descriptive phrase applied to them, which we shall point out.

Although these figures nearly explain themselves, it may be remarked in the language of J. E. Teschemacher, the author of the article referred to, that "the analysis is performed by means of a simple fundamental figure of a circle, on the variations from which, combined with different pyramidal forms of the pear, the descriptions are founded; and in order to exhibit these distinctly, the original circle, when not a portion of the outline of form is delineated by dots." It is also observed that there are examples where the irregularity in the forms of pears is such, as to preclude rigid accuracy in the application of these principles. The remark is added that "the same forms and explanations may also be used in descriptions of the apple, with the substitution of *pyramidal* for *pyriform*; and with the observation that the small end of the pyramid in the apple is at the calyx, while in the pear it is at the stem."

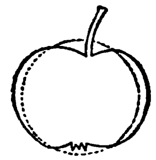
The instance in which we have deviated from the language of the original, in copying these figures, and their explanatory phrases, is in substituting the term *oblate* for *obovate*. We should not have presumed to make this change were we not borne out both by the ordinary definition of the term, and by the universal usage of naturalists as well as pomologists. The term *ovate*, as is well known, implies egg-shaped, or an oval smaller at one end; *obovate*, has the position of the larger and smaller end reversed. Thus, in botany, an ovate leaf is like the longest section of an egg, the larger end being at the base, as in the beech and balsam poplar; it is obovate when of the same shape but larger at the apex, as in the alder and spice-wood. Hence, also, a pear is ovate when the stem is at the larger end; and obovate, when at the smaller. But in the article from which we have copied these figures, the term *obovate* is applied to fruit designated as *oblate* or *flat*; a change in its common meaning so great, that we are puzzled to account for the deviation. A similar application of the term in botany would cause the leaves of such plants as the *Asarum canadense* and *Heteranthera reniformis* to be described as obovate, totally different from all usage. Hence, in deference to usage, we have presumed to restore the term, and apply oblate and its combinations, to such fruits as are flattened at the ends.



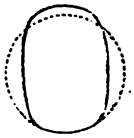
Globular.
Cross.
Bleecker's Meadow.



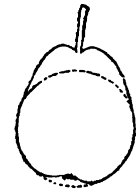
Ovate.
Croft Castle.



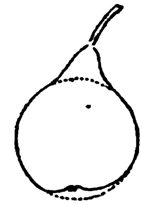
Oblate or Flat.
Gansel's Bergamot.
Fulton.



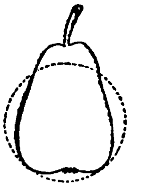
Oblong.
Noue.



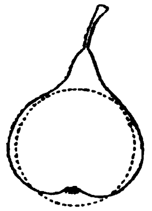
Obovate.
Buffum.
Doyenne.



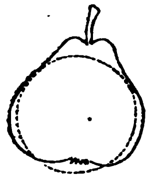
Globular-acute-pyriform
St. Ghislain.
Capiaumont.



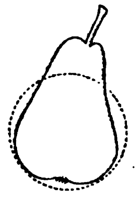
Obovate-pyriform.
Washington.



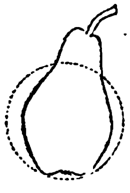
Oblate-acute-pyriform.
Beurre Bosc.



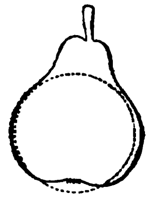
Oblate-obtuse-pyriform.
Winter Nelis.



Oblong-pyriform.
Van Mons' Leon Leclerc.



Oblong-ovate-pyriform.
Vicar of Winkfield.



Oblong-oblate-pyriform.
Bartlett.

The principle, however, of referring the multitude of different forms in the pear to so simple a figure as the circle, and describing their variations from this figure by simple and appropriate terms, which appears to be entirely new, we regard as a very valuable suggestion. It will serve to point out, with clearness and brevity, some forms which would otherwise require many words. For instance, the Vicar of Winkfield partakes of the character of oblong and pyriform, and it has the slight taper towards the calyx exhibited in the figure of the "ovate" form; hence this is at once expressed by the compound term, "oblong-ovate-pyriform."

Onondaga or Swan's Orange Pear.

We notice, in the last number of the *Horticulturist*, a statement of H. H. Crapo, of New Bedford, that this pear fails to make a good growth when grafted or budded on the quince, whether single or double-worked; and that in every instance the trees presented a weak and sickly appearance, while those on pear stocks were vigorous, more rapid in growth and very healthy.

We are satisfied that the success of some varieties of the pear depends as well upon other circumstances, as upon the nature of the variety. The writer has trees of the Onondaga budded directly upon the quince, which have made as vigorous a growth the present season as on the pear, or as any other variety out of 50 sorts, except the Genesee and Louise Bonne of Jersey, the shoots averaging from two and a-half to three feet in length. On the other hand, some varieties famed for their success upon the quince, have nearly or totally failed; some which succeeded perfectly last year, have made but little growth the present; the leaves have turned pale, and copious applications of copperas water and of iron filings at the roots have failed to restore them. These effects may perhaps be ascribed to the season, or to the soil, although all such explanations would be conjectural. The soil is sandy or gravelly loam, which never cracks by baking; and the season, although moist, warm, and producing a rapid growth with most trees, has been unusually attended with what is called the "*leaf*-blight," in the pear and plum.

Pomological Convention at Buffalo.

This convention, called together through the exertions of the officers of the N. Y. State Agricultural Society, and of the Horticultural Society of Buffalo, assembled on the first ultimo, and extended its sessions through the 2d and 4th, occupying three days in all. Fear had been entertained that at so early a season, but few fruits could be collected; a large number, however, were received from several different states, and among them many varieties ripening so early as to be usually excluded from our autumnal exhibitions. In other respects, the convention may be regarded as a very successful effort, and has resulted in the interchange of much valuable information.

Among the principal contributors were noticed the following:—Robert Manning, Salem, Mass.; Charles Downing, and A. J. Downing, Newburgh, N. Y.; F. W. Hayes, Newark, and Thomas Hancock, Burlington, N. J.; David Thomas, Aurora, W. R. Smith Macedon, and Ellwanger, Barry & Rowe, and Bissel, Hooker & Sloane, Rochester, Benj. Hodge, and A. Bryant & Sons, Buffalo, N. Y.; F. R. Elliott, Cleveland, Ohio; George Andrews, Montreal; James Dougall, Amherstburgh, C. W.; A. C. Hubbard. Detroit; all of whom presented large and interesting collections. Charles Hamilton, of Canterbury, Orange county, N. Y., sent to the convention a large and very fine assortment of plums; and several other smaller collections were received, among which were those of J. W. Bailey, of Plattsburgh; L. F. Allen, Black Rock; N. Goodsell, Greece, N. Y., and others. The most interesting and important varieties in these collections, were taken up, and occupied the time of the convention during its several sittings.

The number of delegates in attendance was between fifty and sixty,—from the states of Massachusetts, Vermont, Connecticut, New Jersey, New-York, Pennsylvania, Ohio, Michigan, Indiana, Illinois, Wisconsin, and Missouri, and from the two provinces of Canada—fourteen states and provinces in all. The convention was organized by the appointment of David Thomas, of Aurora, N. Y., as President; three secretaries and ten Vice-Presidents, from as many different states and provinces. A set of rules, for the government of its deliberations, was adopted by the convention, the substance of which was as follows:—The most perishable fruits to be examined first, and to be brought to the notice of the convention by a committee appointed for that purpose—one variety to be examined at a time, and comparisons made from the different specimens present;—members allowed to state facts only in the briefest manner. Discussions on special subjects to be allowed during evenings and intervals, at which no one to speak more than ten minutes, nor twice on the same subject. The pomological rules adopted by the New-York State Agricultural Society, were also adopted by the Convention. Committees were subsequently appointed to examine and report on the seedling or new fruits present.

Among the more active members who participated in the discussions, were Thomas Hancock and F. W. Hayes, N. J.; Wm. R. Prince, Flushing; Charles Downing, Newburgh; Dr. H. Wendell, Albany; P. Barry, J. W. Bissell, and N. Goodsell, Rochester; B. Hodge and W. R. Coppock, Buffalo; J. J. Thomas, Macedon; L. F. Allen, Black Rock; all in New-York; F. R. Elliott, Cleveland, and H. H. Coit, Euclid, Ohio; J. D. G. Nelson, Fort Wayne, Indiana; J. C. Holmes, Detroit, A. T. Prouty, Kalamazoo, Mich.; J. A. Kennicott, Chicago, Ill.; Thomas Allen, St. Louis, Mo.; C. Beadle, St. Catherines, and James Dougall, Amherstburgh, C. W.

With a single exception of a fruit convention held last year at Columbus, for the state of Ohio only, this appears to have been the first attempt of the kind ever made in this country. It was of course to be expected that in so untrodden a path, some time would be consumed in settling preliminaries, and in adopting the best mode of action. Difficulties existed, perhaps inseparably connected with a convention of this nature, which occasioned some confusion, and which are well worthy the attention of those having the control of future meetings of this kind. In all deliberative bodies, it is absolutely essential to preserve order. But specimens must be selected from large collections while the discussions are going on—and if members are to speak *understandingly* of these, they must "*cut and try.*" If fifty delegates are present, it evidently becomes a matter of extreme difficulty to prevent noise and confusion—more especially if they give way to the strong temptation to converse with each other, instead of always addressing the chair. We know of but one way to prevent effectually this evil, where the convention may consist of more than ten or twelve persons, although an energetic chairman, by constant effort, may do much to lessen it. This is, to devote one room to the exhibition of the fruits, and another to the use of the delegates. The fruit room, during the hours of session, only to be entered by a committee of selection, who are to be well acquainted with what is on hand, and single varieties, selected from all the different collections when they are to be found, presented at a time to the convention. The specimens, if practicable, should be sufficiently numerous to enable each member to taste, and should be placed on accessible tables for this purpose. No provision of this kind was made at Buffalo, and the consequence was, that those who had loud and clear voices usually made themselves heard by the reporter, even at those more noisy periods when a dozen were engaged in examinations and private conversation at once. The disscussions, and statements of facts, were, to fruit cultivators, in the highest degree interesting. Some of the conclusions reached we give below:—

PEACHES.

Early Barnard.—A good, very hardy, and productive peach, known in many parts of Western New-York under the name of Yellow Alberge, and in some instances as Yellow Rareripe, but quite distinct from either, and much superior to the European Alberge.

Cooledge's Favorite. Late specimens were presented, and it was decided by all who are acquainted with it, to be first rate in quality.

Jaques' Rareripe, (one of the largest yelllow peaches known,) was unanimously recommended as "a fine large Early peach, but not of the highest quality in flavor." Nearly the same verdict was given in relation to

Crawford's Early, a remarkably showy variety, specimens of which were presented measuring nine and a-half inches in circumference, with a statement by F. R. Elliot, of Cleveland, that he had measured some the present season *eleven inches* in circumference.

Haines' Early Red, from different sources, was considered by a part of the delegates, as identical with the *Honest John*, or *Large Early York* of New-Jersey, while others regarded it as distinct; but all voted it a first rate variety.

The *Early Malden* peach, a new seedling, was presented by James Dougall, of Amherstburgh, C. W., having been kept two weeks in ice. It promises to be an acquisition of the highest value. It is of good size, red, very free from the stone, of excellent flavor, the leaves glandular, and it ripens about the time of the serrated Early York and Early Tillotson. It has borne three years.

The *Snow peach* was decided to be a first rate variety for preserving, but the convention was divided as to its other merits, some regarding it as first rate and others as only second rate, for the table.

The *White Imperial*, received a unanimous vote, as the *Oldmixon free*, and the *Large Early York*, of N. J., fruits of the first quality.

The *Royal George* peach was decided to be unworthy of general cultivation, on account chiefly of the mildew of its leaves and branches.

NECTARINES.

James Dougall, of C. W. presented specimens of the *Large Early Violet* nectarine, a rare variety, distinguished by its superior size from the common Early Violet, and of fine quality.

The *Downton* nectarine, from A. J. Downing, which has so high a reputation for excellence, proved to be of the very highest character.

PEARS.

The following eight varieties received the unanimous vote of the convention as pears of the first quality, and worthy of general cultivation:

Dearborn's Seedling,
Tyron,
Rostiezer,
Golden Bilboa,
Bartlett,
Louise Bonne of Jersey.
Beurre d'Aremberg,
Glout Morceau.

Dearborn's Seedling was commended, not only on account of its high flavor, but for its uniform excellence in all places and under all circumstances, although its quality is diminished when it overbears, to which it is liable.

The Tyron, fine specimens of which were sent to the convention by W. R. Smith, of Macedon, N. Y., was placed among the best summer pears. It was decided by the Philadelphia Horticultural Society, to be superior to Dearborn's Seedling.

Stevens' Genesee was pronounced, nearly unanimously, to be *among* first rate pears;

Beurre d'Aumalis, as second rate in flavor, but worthy of cultivation in large collections on account of its size, fairness, productiveness, and free growth;

The *Andrews*, as nearly first rate;

The *Marie Louise*, for general cultivation, but not unanimously;

The *Cushing*, as second rate;

The *Bezi de la Motte*, and *Julienne*, as unworthy of general cultivation.

The *Washington*, although according to the statement of Thomas Hancock, decided at Philadelphia to be superior to Dearborn's Seedling, was pronounced by the convention to be not fully first rate.

The *Bloodgood* was voted to be one of the best summer pears. On light soils it was found to be invariably fine, but several statements were made to the convention where its flavor had proved inferior on heavy soils, while others were given, where on such soils it had been excellent.

The *Brown Beurre* and *Orange Bergamot* were pronounced unworthy of cultivation.

A specimen was presented by Dr. H. Wendell, of Albany, which excited great interest, and which was believed to be the genuine BEURRE SPENCE. The tree had been received as such, four years ago, from Thomas Rivers, of Sawbridgeworth, England; the fruit was wholly different from any other variety known, and although unripe, had a very promising appearance.

PLUMS.

The following varieties of the plum were decided to be first rate:—

Purple Favorite,
Red Gage,
Washington,
Green Gage,
Imperial Gage,
Jefferson,
Bleecker's Gage.
Red Diaper,
Coe's Golden Drop,

La Royal and *Smith's Orleans*, were recommended as nearly first rate. *White Magnum Bonum* or *Yellow Egg*, first rate for the kitchen, and third rate as a table fruit. *Diamond*, as third rate.

[A notice of the examination of apples we are compelled to defer till next number.]

In the evening of the last day of the convention, an address was given before the Buffalo Horticultural Society and the delegates in attendance, by DAVID THOMAS, President of the Convention. It was deeply interesting and of a highly-practical nature, richly illustrated from the mature observations and long experience of the speaker. As this address is to be published, we may notice it more fully on a future occasion.

The following evening, a large audience assembled to hear an address on Horticulture from Gen. DEARBORN, of Massachusetts, formerly President of the Massachusetts Horticultural Society. The address was wholly extemporaneous, and was what was to be expected from his distinguished talents and eloquence. The progress of Society, from its rudest forms, and in the earliest ages, through the various gradations to the more refined civilization, was vividly traced; the early history of this progress in our own country was given; a picture of Buffalo was presented, as it was when visited by the speaker thirty-five years ago, when only *ten* buildings stood on the ground now occupied by 45 thousand inhabitants, and its entire commerce consisting of three batteaux; the rapid progress of horticulture of late years was shown, and the fact stated that more had been attained during the last five years, than in all the previous period since the settlement of the country. At Boston, where within the age of middle-aged men, the more common apples, pears and plums, were only raised, there are now establishments embracing more than a thousand different bearing varieties, and which send their products into all the different states of the Union, and to nearly every country of Europe. The exalted nature of horticultural pursuits, and the high perfection of civilization indicated by their cultivation, were strongly exhibited, with its influence in promoting the arts of peace, domestic enjoyment, and freedom.

Peaches at the South.

A Mobile correspondent of the *Horticulturist* states some very interesting facts relative to the culture of early peaches at that place. The Early Tillotson, the second year after transplanting, bore ripe fruit on the tenth day of sixth month, (June,) and he thinks "they will be as good as could be desired." The Early Yorks were ripe the 20th of the same month, and were "splendid." This is two months earlier than in central or western New-York. Would not an orchard of peaches, say a thousand acres, within a few days, by steamer, of New-York city, that would furnish us fine fruit as early as the usual strawberry season, be a very profitable investment to the cultivator, as well as a great addition to our comforts?

The Yellow Harvest apple at the north, is rather earlier than the earliest peaches, but we infer from a notice of the same correspondent, that it does not ripen there as soon as the Tillotson and Early York peaches, or, in other words, the difference in climate does not so much affect its time of maturity.

Destroying Rosebugs.

I have got my *Cultivator* for August, and am not a little amused with "Hampden's" mode of killing rose bugs with "an old warming pan" filled with live coals. He would get tired of such a tool if he were working in a vineyard by the acre. He will find an easier mode of destroying them given on page 254 of the 2d vol. (new series) of the *Cultivator*,—but a better yet I think I have discovered during the past year; which is to cover the ground with straw or refuse vegetable matter. I covered about a third of my vineyard with drift stuff from the river shore—leaves, reed-grass and chip dirt, spread about three inches deep on the ground, and where that was done, there was not one-tenth as many bugs as in the rest of the vineyard. If it had been well filled in with ashes, it might have been better yet, but my object in putting it on, was the hope of benefitting the vines. The effect on the bugs was unexpected. Yr's, H. W S. Cleveland. *Burlington, N. J.*

Thoughtlessness.

A gentleman of our acquaintance in the country, built a few years since, a large and fine house, costing three thousand dollars. He subsequently was occupied in laying out and planting the grounds, and we ventured to suggest to him the propriety of setting out fifty or a hundred ornamental trees or shrubs, tastefully arranged about his dwelling. "O, he could not *afford* it!" His grounds were to be wholly planted with *fruit trees*, all in rows, particularly the front of his house. Now, we know nothing more pleasant than an abundant supply of fruit—but the inconsistency was the expenditure of from three to five hundred dollars to give an ostentatious finish to his house, and then declining to pay one hundred in purchasing, planting and tilling its immediate environs, in a manner somewhat in accordance with the rest of his operations. Why is so much reliance placed on building—so little on tasteful planting? A retrenchment of a sixth part of the cost of the house, ($500,) would scarcely have been felt or noticed;—the application of one-sixth of this fraction ($83) in judicious planting, would have made almost a little paradise around it, and contributed more to an air of comfort, respectability and beauty, than any amount of architecture without it, or with only four straight rows of plum trees.

The Best Hardy Grapes.

It would appear that the grape is peculiarly liable to changes of quality with country and locality. In the Catalogue of the London Horticultural Society, our finest native varieties do not receive much commendation. The Bland, the Elsinburgh, the Isabella, and Catawba, are all pronounced "*bad*;" nor is any other American sort more highly commended. Now we all know that these identical varieties, when well ripened in this country, are generally regarded as delicious; and when the facility of their cultivation, in comparison with most of the exotic varieties, is taken into consideration, it is not surprising that they are taking the lead of the latter in general use.

The two favorite sorts are the *Catawba* and *Isabella*. Both are hardy, and are exceedingly productive. The Isabella has been generally introduced throughout the state of New-York, and is almost as familiarly known as the Spitzenburgh apple. It ripens, except in unfavorable seasons, but is too often eaten when half matured, and before its fine flavor is developed. The Catawba is hardly so early in ripening as the Isabella, but it succeeds finely in warm situations. In beauty of appearance, in excellency of flavor, and in productiveness, combined, it may be considered as taking the first rank among all hardy grapes, wherever the climate will admit its ripening. In growth, it closely resembles the Isabella, but may be easily distinguished by the rusty or brown tinge of the pubescence of its young leaves. N. Longworth of Cincinnatti, states that he has had a bunch at one of his vineyards weighing 1½ pounds.

The *York Madeira*, (totally distinct from the Alexander,) resembles the Isabella, but is free from the pulpy core of the Isabella, and ripens earlier, and hence would succeed further north. In size, it is a medium betweeen the Isabella and Elsinburgh; it is remarkable for the *shortness* of it joints. It appears to be but little known, and is not described in Downing's work on Fruits, the York Madeira being there placed as a synonym of the Alexander, an austere variety, not worth cultivating. It is not so rich, but is preferred by some to the Isabella.

The *Ohio* and *Lenoir* have been much cultivated near Cincinnati, and are estimated as fine for the table, possessing no pulp, and believed to be, at least in part, of foreign origin. At Boston and Albany, the Ohio is too tender and is of little value. The Herbemont strongly resembles the Lenoir, but differs, according to Longworth, in its less vigorous growth, darker colored wood, and the brownish cast of its terminal leaves, those of the Lenoir being green.

Horticultural Humbugs.

There are a number of these which take periodical journeys in the papers, and are thus "rescued," as the *Prairie Farmer* says, "from drowning." Among them are, that the insertion of apple grafts in a potato before planting in the earth, insures their growth; that covering asparagus stalks with a bottle, the stalk will soon swell prodigiously and fill the bottle; that the exclusion of grubs from cabbage may be effected by a circle of salt; that transplanting evergreens is successful at midsummer; that by grafting or budding the peach on the willow, the fruit, "*when*" it grows, will have no stones; that plucking potato balls will cause a great increase in the tubers; that peach and apple seeds, planted in the fruit, will infallibly re-produce the same variety; that the escape of sap, by pruning the grape in spring, will destroy the vine; that the growth of vegetables or weeds, will prevent the soil from drying by affording shade, &c.

Ripening Pears.

Those who have new varieties of pears ripening this year, must bear in mind that many of them will never exhibit their excellent qualities, unless picked just before maturity, and the ripening completed in the house. Not only must all those liable to core-rot be treated in this way, but many others. In some cases, certain varieties should be gathered two or three weeks before ripe, to prevent insipidity. We suspect the low estimate placed upon the Onondaga or Swan's Orange pear last Autumn at Boston, was in consequence of its not having been taken early enough from the tree, in a peculiar season, as specimens in the possession of the writer, picked three weeks before mellowing, were found fully equal in flavor, when tasted side by side, to the Dix and Louise Bonne of Jersey.

Errata.—Two typographical errors of a serious character, occured in the second column of the article in our last number on "*The Nursery Business*." One, where the cost of ten acres of nursery for a year is put down as $1,000, instead of $2,000; and the other where the number of good saleable trees on 2¼ acres is erroneously printed *one thousand*, instead of *ten thousand*. These errors, uncorrected, almost destroy the value of the article.

"HINTS TO EMIGRANTS."

HINTS TO EMIGRANTS, *or to those who may contemplate emigrating to the United States of America. By Rev.* D. R. THOMASON, *Secretary of the Philadelphia Emigrant's Friend Society.*

The great tide of foreign population which is constantly flowing to our shores, has long rendered some safe and correct emigrants' guide, a desideratum. Mr. THOMASON'S manual we think, supplies the want indicated. It is written with much candor, and evidently with a strict aim to truth. The writer is an Englishman, who has resided in the United States eighteen years, and during that time has had opportunities for acquiring a good knowledge of the various sections. His remarks are addressed chiefly to the laboring classes of Great Britain and Ireland, who contemplate emigrating to America for the purpose of engaging in agriculture. His ideas in regard to the expediency of emigration, for people in various circumstances, appear to be well founded. It is the *small* farmers and farm-laborers, that he thinks would be most benefitted by a removal to this country. The *independent* tenant farmer, he advises to remain where he is; because "the inferior prices of farm produce in this country, and the higher rate of wages, together with the less abundant crops which are raised, less owing, probably to any inferiority of soil and climate, than to the mode of cultivation, render farming less profitable here than in England;" so that "the tenant of a large farm there, can afford to live better than the owner of the same number of acres here."

But to the two classes before mentioned, the inducements to settle in this country are great. In relation to the small farmer, it is said—"the proceeds of the sale of the stock and lease of your farm, will buy you a good farm in this country. Here you may live in independence and comfort. You have the advantage of education for your children, and may see them, instead of going down a step in society below yourself, moving upward; for it is the glory of our country, that the path of our children is upward, and that to their elevation there are no limits till they reach the summit and are in possession of the highest honors which their country can bestow."

The advantages offered to farm laborers are equally great. "They can find plenty of work here, and their children, if they are able to work, can get good places—for good boys and girls are much wanted. Servant girls may come over in any numbers, if they bring good characters with them, and they may find good places as soon as they arrive. * * * Boys above ten years of age may be placed with farmers or mechanics, until they are eighteen, and they will have board and clothing and schooling the while—girls may be placed in the same way."

He alludes to the extravagant expectations in relation to wages which foreigners, on first landing here, frequently entertain to their injury. His counsel is—"get employment as soon as you can, on any terms; be industrious, attentive, respectful; make it to the interest of your employer to keep you, and you will soon find out how much you are worth, and you will get it too."

More good advice is given in the following language: "Do not come out under the idea of settling in any of our seaports. You must keep out of the crowd, is the advice we have constantly to give to emigrants. To the want or neglect of this advice, the lamentable failures and misfortunes which befall foreigners in this country must mainly be ascribed. I know only two descriptions of emigrants who may safely calculate on finding employment in cities. These are, lads and female servants."

A word of useful caution is given to young servant girls. "I have said that men from the old country must try, as soon as they can to be like Americans; but I advise you to stay what you are; in dress, deportment, habits, the same modest, respectful, affectionate and faithful girls you were at home. You know not how much you will be prized. You have, probably, heard that in this country, female domestics are not called servants but *helps*, that they sit down at the same table with their masters and mistresses, and are altogether treated as members of the family. In the country generally, this is the case, though less so than formerly; but in our cities and larger towns, the English custom obtains; and I can assure you that the American practice is productive of much unpleasantness and annoyance, and is the principal cause why there is so little attachment between the mistress and servant. The latter may insist on equality with the former, and the claim may reluctantly be submitted to, because otherwise the '*help*' will not stay in the house; but she will be far less respected than the girl who knows her place and is willing to take it. Your duty and interest will be to leave this matter to those who employ you, and take with becoming modesty and cheerfulness whatever place is assigned you."

The section of country which the author deems most eligible for emigrants, is the southern part of the state of New-York, the states of New-Jersey, Pennsylvania, Maryland, Delaware and Virginia. Preference is also given to cleared lands, as better adapted to the general habits of foreigners than those which are heavily timbered. The latter conclusion is probably correct; and it may be true, as a general rule, that the section of country named, offers the greatest inducements to the class of settlers alluded to; but we think there are other parts where the emigrant may locate advantageously, without encountering the obstacles incident to pioneer farming, clearing the forest, &c. In Ohio, Indiana, Illinois, Michigan, Wisconsin, &c., near the navigable waters, or with means of communication by railroad or canal, there are always farms, more or less improved, and with good natural soil, which may be bought comparatively cheap,—the owners having the prevalent passion for selling out and removing "west." All agricultural products suitable for transportation readily sell for cash, where there is ready communication with the lakes, and the markets may be expected to improve.

The "old lands" of Virginia are favorably spoken of for emigrants, in the work before us; and the outlines of a system of cultivation, adapted to that section, are given. The chief peculiarity of the proposed system, consists in keeping the live-stock on the soiling plan. This, on account of the facilities it affords for making manure, we have little doubt would be preferable at first—especially as there would probably be a scarcity of suitable grasses for grazing—and perhaps might be found most profitable as a permanent system.

In conclusion, we will remark that the little work contains much information, valuable in an agricultural, civil and moral view; and we cordially recommend it to the attention of the class for whom it was designed.

NEW-YORK STATE FAIR AT BUFFALO.

The eighth Annual Show and Fair of the New-York State Agricultural Society took place at Buffalo, agreeably to appointment, on the 5th, 6th and 7th of September, and in the aggregate may be said to have fully equalled any former exhibition. The weather, always an important element in the success of displays of this kind, was all that could have been desired, not only during the show, but for several days preceding, which greatly favored the attendance of competitors and spectators. The collection of people was immense, estimated at least at fifty thousand. We are informed that the entire receipts were upwards of six thousand dollars, and this sum would seem to justify the above estimate, as to the number of persons admitted within the gates.

The attendance from abroad was very large. Every state in the Union was represented, and the population of those parts of Ohio, Michigan and Canada, which border on the lakes, turned out in *masses*. All mingled with our own citizens with perfect harmony, and the utmost cordiality and good feeling prevailed throughout. The general appearance and demeanor of the vast crowd was highly creditable. We did not see a disorderly person, nor hear of a vicious or mischievous act. All seemed actuated by a laudable motive of learning something useful, or else desired to gratify an innocent curiosity; and nearly every one appeared pleased and satisfied. In every view of the case, the exhibition has afforded abundant cause of gratulation,—it has been a credit to the *Empire State*; both in respect to the display of its products, and the indication it has afforded of the enterprise, taste and intelligence of its citizens. It is a matter of gratification, also, that these occasions are beginning to be regarded as the *annual jubilees* of the people; and we are confident that their influence in the establishment of our reputation and good standing, is very important.

The show-ground was on an elevated ridge, about two miles north of the city, and comprised an enclosure of sixteen acres, admirably suited in every respect, to the purpose. The arrangements were generally convenient. Three large buildings received most of the manufactured articles and dairy products, and a large tent was provided for the horticultural department. The smaller implements were shown in one of the buildings, and the larger ones were arranged in the open ground.

The animals had every accommodation which could be provided on such an occasion. The cattle were fastened in a beautiful grove, which extended nearly across the entire breadth of the show-ground, and afforded ample room for several hundred animals, which being abundantly supplied with forage and pure water, reposed quietly in the shade. This was a great advantage over a situation exposed to the scorching heat of the sun. The sheep and swine were in pens, shaded by boards laid across one side. The horses were disposed mostly in the central part of the field, and when exhibited to the judges were paraded in a circular enclosure where there was sufficient space for them to display their action.

We have only room to notice briefly the different departments of the show.

The Horses were very numerous, and comprised specimens of almost every breed and variety, from the diminutive Shetland pony to the enormous English draught horse. There were no less than seventy entries for stallions, divided into four classes, in each of which there was a fair proportion of good animals.

Of horses from out of the state, there were several from Canada, eminently deserving of notice. Prominent among these was the blood stallion *Mercer*, bred by the late king William Fourth, and now owned by John Gibson, of St. Catharines, C. W. He is a horse of beautiful proportions and figure. There was on the ground a draught horse called *Clyde*, of the Clydesdale breed, from Scotland, owned by Jane Ward, of Toronto, C. W. This horse was eighteen hands high, and of great bulk. He attracted much attention. Notwithstanding his enormous size, he moved with ease, and with a lighter and more sprightly gait than many horses of not much more than half his weight. The stallion *Alfred*, of the Cleveland breed, owned by H. Davis, of Toronto, and *Young Clyde*, owned by C. Harrison, of the same place, received much commendation. Five imported Shetland ponies, presented by James Dougall, Esq., of Amherstburgh, C. W., gave additional variety and interest to this department. There was also a beautiful Mexican pony, with Spanish saddle and trimmings, offered by H. Betts, of Meadville, Pa. Two mares of the Morgan stock, presented by C. H. Blodgett, of Chelsea, Vt., were much admired. There were several pair of matched horses from Illinois, Wisconsin, Michigan, and Ohio.

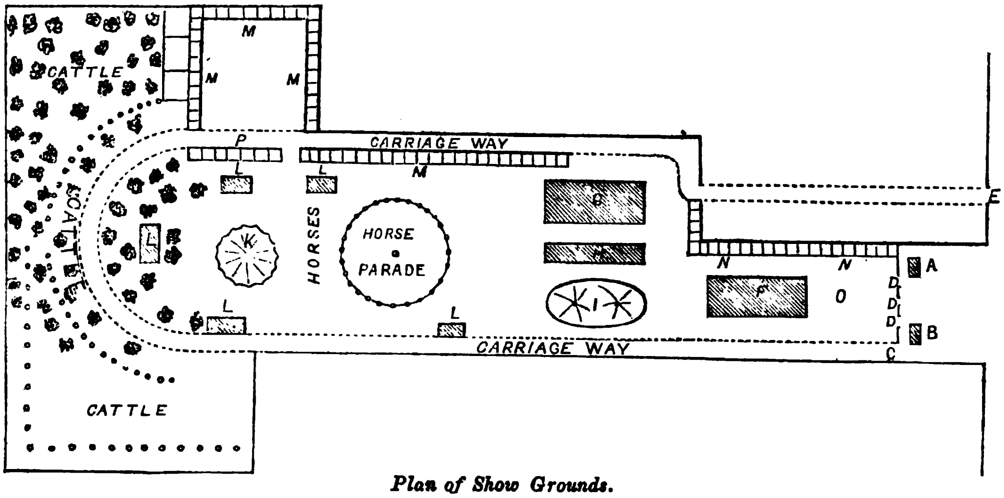
Of horses from within the state, we noticed among the class of "blood horses," *Bucyrus*, twenty-one years old, owned by S. W. Holmes, of Chautauque, Chautauque county,. (This horse was said to have been got by the *American Eclipse*, out of a mare bred by John Randolph, "of Roanoke," Va.) A very handsome and showy horse called *Young Alexander*, was presented by E. H. Ireland, of Watervleit. *Hornblower*, offered by Dr. E. C. Dibble, of Batavia, is an active horse, with strong marks of high blood.

Among the horses of "all work" we noticed two stallions, presented by John Henderson, of Mendon, Monroe county. One of these was bred in Vermont, and is a good specimen of the Morgans, except that his size is somewhat less than the average of that stock. He is a remarkably well-formed, vigorous, and active animal. The other horse is larger, but has less of the Morgan character. There was an imported stallion of the Cleveland-bay breed, called *North of England*, presented by Stephen Powell, of Lewiston; and several large and fine-looking colts, four years old, by this horse, offered by Mr. Powell and Mr. Robinson, of Lewiston.

In the class of "draught-horses," there were several deserving notice. The Norman horse *Louis Philippe*, owned by R. B. Howland, of Union Springs, Cayuga county, is an animal of great power. *Young Alfred*, offered by C. Scoby, of Springport, Cayuga county, appeared well. The four-year-old stallions belonging to Wm. Fleming, of Bethlehem, Albany county, P. Root, of Westfield, Chautauque county, and John Sybrant, of Lockport, Niagara county, all got by the imported draught-horse Sampson, were evidently strong and hardy animals.

The colts, from three years old downward, were numerous. Two two-year olds, by *Black Hawk* one owned by Gen. S. M. Burroughs, of Medina, and the other by Andrew Ellicot, of Shelby, Orleans county, attracted great attention. If they meet with no accident they will make horses that will be *heard from*.

Many breeding mares and foals were exhibited, but with a few exceptions they were of an inferior *caste*. Some good single horses were shown in harness. There



Plan of Show Grounds.

References.—*A.* Secretary's office.
B. Treasurer's office.
C. Carriage entrance.
D. D. D. Foot entrances.
E. Carriage egress.

F. Mechanics' Hall.
G. Manufacturers' Hall.
H. Dairy Hall.
I. Horticultural Tent.
K. Society's Tent.

L. L. L. L. Refreshments.
M. M. M. M. Sheep pens.
N. N. Poultry houses.
O. Implements and machines.
P. Pens for Swine.

were several pair of matched horses, but they were not in general as good as those offered at previous exhibitions of the Society.

The Cattle were more numerous than usual. There were specimens of Durhams, Herefords, Devons, Ayrshires, and grades. Several of different breeds were from Canada, and some from Ohio. J. B. Ewart, of Dundas, C. W., and Geo. Waters, of the same place, showed several fine cows, bulls, and heifers. of the Ayrshire breed. Messrs. Dougall, of Amherstburgh, Davis, of Toronto, and Maj. Rooth, of Dundas, showed some good Short-horns, of various ages. Samuel Cloon, of Cincinnati, Ohio, exhibited a very large and showy Short-horn bull, five years old, called *Sultan*, and two handsome calves. Frederick Brown, of Hudson, Summit county, Ohio, exhibited two large Short-horn cows, bred in Kentucky.

The Short-horns from our own state were numerous, but in general, we think the quality was not equal to most former exhibitions. The class, however, comprised several fine animals. The principal exhibitors were Col. Sherwood, of Auburn, L. F. Allen, Esq., of Black Rock, Robert Rone, of Mt. Morris, Livingston county, Z. B. Wakeman, of Herkimer.

The Herefords were not in great number, and the largest lot, Mr. Sotham's were in rather low flesh; but Mr. S., Hon. Allen Ayrault, of Geneseo, and S. W. Holmes, of Chautauque, had some fine stock. The two-year-old bull and heifer of Mr. H.'s, were not excelled by any of their age on the ground.

Of Devons, the display was larger than we have before seen, and they were generally very good—in several instances fine. This stock is evidently becoming popular. There were thirteen lots in this class, embracing seventy animals. E. P. Beck, of Sheldon, Wyoming county, H. N. Washbon, Butternuts, Otsego county, L. F. Allen, of Black Rock, J. W. Hamlin, of Aurora, Erie county, Dr. E. C. Dibble, of Batrvia, R. Radley and Mr. Vernon, of Stafford, Genesee county, showed excellent breeding stock. Mr. Hamlin's three-year-old bull, Mr. Beck's a year older, (of the same family,) and several of the cows and other stock offered by Mr. Washbon, Mr. Radley and Mr. Allen, were beautiful samples of the breed.

There were but few Ayrshires, except those before mentioned from Canada. Jas. S. Wadsworth, Esq., of Geneseo, and Mr. Rone, of Mt. Morris, Livingston county, each presented a good cow of this breed.

The show of fat cattle was probably the best ever seen in the State. There were twenty-eight animals, of different ages, and of every stage of fatness, from those which were only grass-fed, to those which were loaded with fat to the last degree. A pair of oxen, weighing near 3,000 pounds each, and of extraordinary fatness, were offered by J. & F. A. Alberger, of Buffalo. A pair of twin cattle, very large and fat, were shown by L. Brainard, of Attica. A short-horn cow, (*Pink*,) of great weight in proportion to the bone, was shown by Robert Hadfield, of Sheldon, Wyoming county. A grade short-horn cow, presented by Hon. A. Ayrault, of Geneseo, was very fat. A cross-bred Durham and Devon cow, offered by N. Kibbe, of Westfield, Chautauque county, was a fine animal. There were several pair of very superior fat steers and young oxen, from two to four years old, presented by Mr. Wadsworth, Mr. Ayrault and Mr. Freeman, of Geneseo, Mr. Sheldon and Mr. Munson, of Sennett, Cayuga county, and Mr. Humphrey, of Victor, Ontario county. A red two-year-old steer of Mr. Wadsworth's, deserves special mention. Considering him in regard to his form, size and *quality*, he was one of the most perfect animals of the ox tribe, we have ever seen.

The working oxen, though in considerable numbers, made, with few exceptions, but a poor display in appearance. There was but one team of ten yoke from any town, and that was composed of quite ordinary cattle.

The show of Swine was very limited, and not in general to be commended. R. B. Howland, of Union Springs, Cayuga county, showed a good Berkshire boar; and there were some good Leicester hogs offered by C. R. Nichols, of Darien, Genesee county.

The Sheep were perhaps equal in numbers to those of any former exhibition of the Society, but the Saxons and Merino's were in fewer hands than we should have desired—in other words, there should have been more competition. There were a few Merinos from Ohio, several lots from Vermont, and a few Leicesters from Canada. A handsome lot of fat Leicesters were offered by Samuel Peters, of London, C. W. The Merinos offered by Charles Button, of Franklin-Mills, Portage county, Ohio, were considered good. There were some very good sheep from the flocks of Mr. Jewett, of Weybridge, Mr. Wright, of Cornwall, and Mr. Campbell, of Middlebury, Vt.

Of Merinos within the State, Col. Sherwood, of Auburn, exhibited about seventy head, among which were some excellent ones. J. D. Patterson, of Westfield, Chautauque county, showed twenty-one very good rams, of different families, and two ram-lambs of the stock of Mr. Taintor, of Hartford, Ct. A ram of good form and excellent fleece, fine in staple, and of remarkably even quality over the whole body, was offered by D. J. Lee, of Darien, Erie county. Gen. Harmon, of Wheatland Monroe county, E. C. Sherman, of Middlebury, Wyoming county, and C. C. Pierson, of Avon, Livingston county, offered good sheep.

Some prime South-Downs were offered by Z. B. Wakeman, of Herkimer, and Col. Sherwood, of Auburn.

We noticed good long-wooled sheep—Leicesters and Cotswolds—offered by E. P. Beck, of Sheldon, Wyoming county, L. F. Allen, of Black Rock, Thos. Terry, of Mt. Morris, Livingston county, John Wilkinson, of Tonawanda, Erie county, and George Swales, of Sodus, Wayne county.

The show of Poultry was very large. They occupied sixty coops, arranged in a row. In fairness, however, we are compelled to say that many of the lots were of but indifferent quality. There were Bremen, African, Chinese, and wild geese; Muscovy, mongrel, and top-knot ducks; white and buff-colored turkeys; the different varieties of the Malay fowls, the Dorkings, Jersey blues, black, white, silver, and golden top-knots, and bantams; Guinea fowls, prairie hens, and fancy pigeons, with a sprinkling of parrots and Canary birds.

There was one thing in the classification of fowls that we think objectionable, viz: the application of different names to the same breed. Thus we noticed the names of China, Cochin-China, Ostrich, Bucks county, Java, and Malay, applied to lots which were evidently but trifling variations of the general tribe of Malays. The unnecessary multiplication of names only serves to create confusion, and lead people to purchase what they already possess, or do not want. The prairie hens (pinneted grouse) were a novelty, and attracted more notice than anything elsein this department. There were 50 of them, apparently well domesticated and contented. They were offered by George F. Morris, of Buffalo.

The principal competitors were H. A. Parsons, Buffalo, L. F. Allen, Black Rock, N. S. Smith, G. Clarke, and J. E. Marshall, Buffalo, and D. Redmond, of Utica. The Dorkings of Mr. Allen, were very superior. Mr. Redmond offered a lot of Jersey blues—a large and handsome formed fowl, apparently a cross of the game and Malay or Java breeds.

Four pair of fancy lop-eared rabbits were offered by Mr. Redmond. They are of the stock imported by F. Rotch, Esq., of Butternuts, N. Y. One pair, six months old, weighed seventeen and a half pounds. Mr. Parsons also presented several pair of very handsome rabbits—white, with black ears, and a narrow ring of white round the eyes, and occasionally a small line of black along the centre of the back.

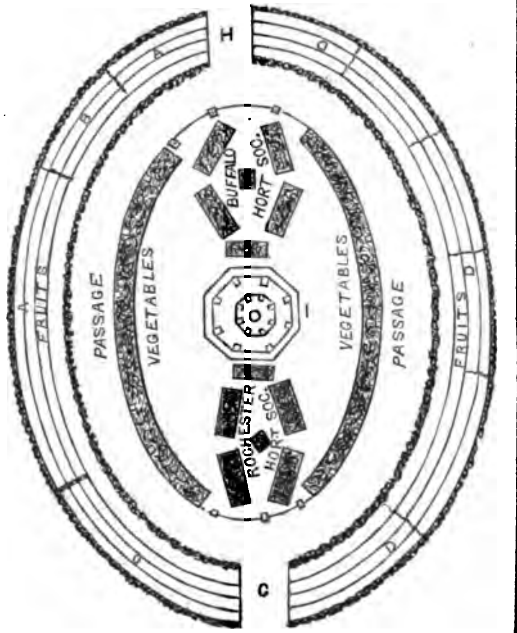
The Dairy Products, were in considerable quantities. There were thirty-two entries for cheese, and twenty-four for butter. We were told by those who examined the cheese, that it was generally of good quality; the butter did not receive general commendation, though there were some lots of superior quality. We noticed a lot of twenty cheeses, taken from a lot of 8,000 pounds, manufactured for the Spanish market by George Hezlep, of Gustavus, Trumbull county, Ohio. It was similar in appearance to the cheese made in the vicinity of Winchester, Connecticut, by Mr. Coe and others. A lot of Stilton cheese was offered by Henry Parsons, of Guelph, Canada West. Mr. P.'s cheese of this kind is well known in the Canadian cities, and is much sought after. We noticed lots of good cheese from D. Newton, and E. and H. Colvin, of Hamburgh, Erie county, and Wm. Ottley, of Oaks' Corners, Ontario county. Fine butter was offered by John Holbert, of Chemung, Chemung county. (Mr. H. has on several occasions received the Society's premiums.) Good samples were also offered by N. Van Ness, of Mayville, Chautauque county, and A. Woodruff, of Sheldon, Wyoming county.

The Implements were more numerous than at any former exhibition of the Society, and they made a very handsome display. There were several new articles which seem likely to become useful. The chief exhibitors were H. L. Emery, of Albany, Starbuck & Son, of Troy, Rapalje & Briggs, of Rochester, E. R. Burrall, of Geneva, and Eddy & Co., Union Village, Washington county. We have not room, at present to notice the various articles in this department, but in our next shall furnish a more particular account.

The arrangement for the exhibition of Horticultural products, were commodious and excellent. A large elliptical tent, 80 feet wide, and 120 feet long, was devoted to this purpose. Around its whole interior circumference, extended a line of four terraced shelves or tables, covered with white muslin, and edged at each terrace with evergreens. The whole distance round, these were loaded with handsomely arranged specimens of fruit, from several different states of the Union. A railing, 4 ft. off, covered with white muslin, and with a dense evergreen lining, protected these fruits from the passing crowd. Within this railing, was a broad passage for spectators. Still, within the passage, were semi-elliptical tables heavily loaded with vegetables of large, and some of really mammoth growth, from a great number of contributors. These tables, occupied an aggregate length of more than 100 ft. very densely covered. In the centre of the tent was an exceedingly rich and chaste evergreen temple, octagonal in form, on a green massive base. It was 17 feet in diameter, and 22 feet high, and its interior was decorated with a fine statue of Flora. For the arrangement and execution of the ornamental part of the interior of the great tent, the public are indebted largely to the excellent taste, energy and perseverance of the ladies of Buffalo.

Between this temple and the entrance passages on either side, were tables covered with a brilliant display of flowers, arranged in great variety. We noticed a beautiful moss basket, densely filled with a rich admixture of fruits; a splendid parterre of dahlias; and a massive vase on a green pedestal, containing a pyramid of flowers nearly 6 ft. high, the whole being 9 feet in height, all from B. Hodge of Buffalo. A. Bryant & Sons, of the same place, occupied a part of the tables with large collections of flowers, including a pyramid 6 ft. high. An extensive collection of cut flowers, in vials and hand vases, was exhibited by Ellwanger, Barry & Rowe, of Rochester; their display of Dahlias was particularly fine, and contained many brilliant, rich and rare varieties. Four square moss baskets, filled with parterres of roses, dahlias and verbenas, and a large number of greenhouse plants were furnished by Wm. Webb, of Buffalo. An artificial evergreen support for flowers, somewhat in the form of a tree, the arms terminating with brilliant bouquets of flowers, was also presented by Mr. Webb. A number of smaller collections were noticed, and one especially from E. T. T. Martin, of Owasco, containing some fine and rare sorts.

Among the contributors of fruits, were Elliot & Co., Cleveland, Ohio; Ellwanger, Barry & Rowe, Rochester; A. Bryant & Sons, and B. Hodge, Buffa-



Interior of Great Tent.

A. A. Fruits from Cleveland. *E.* Vase with pyramid of flowers.
B. do Montreal. *F.* Support for flowers.
C. do Detroit,&C.W. *G. H.* Ingress and Egress.
D. D. D. do This State. *I.* Temple of flora.

lo; **Jas. Dougall**, Amherstburgh, C. W., **J. C. Holmes**, and **Hibbard & Davis**, Detroit, all of whom exhibited large miscellaneous collections. **George Andrews** of Montreal, presented a very extensive collection of apples, mostly of European origin, with some of the celebrated Canadian varieties, beautifully arranged and divided on the different terraced tables into early, middle and late. We noticed also, a large collection of apples, and a few fine peaches, from **L. Fay**, of Portland, Chautauque Co., N. Y.; some very choice peaches, plums and pears, from **H. G. Dickerson** of Lyons; Hawley and other apples, from **E. C. Frost** of Chemung Co., N. Y.; a branch of Oswego Beurre, two ft. long, loaded with near a half peck of fruit, with several other fine sorts, from **J. W. P. Allen**, of Oswego; splendid baskets of Crawford's Early peach, from **Jas. M. Whitney**, of Rochester, an admirable fruit for public exhibitions, for although not of the highest quality. its great size, and rich and showy appearance excite universal admiration in those who have only the privilege of feasting their eyes. Among the spectators, no fruit attracted more attention than the showy and monstrous Alexander apple, found in several collections and humorously called "*Alexander the Great,*" but possessing little real merit, though producing a total eclipse of smaller and better varieties. One of the best and largest collection of peaches, was from **Bissell, Hooker & Sloane**, of Rochester. But the largest collection by far, which appeared upon the tables, though perhaps not the most numerous in varieties, was that presented by the Cleveland Horticultural Society, furnished by 17 different contributors, and occupying 70 feet of the circumference of the great Tent.

Manufacturers' Hall was distinguished by the rich profusion of the useful and ornamental, in almost endless variety, which has marked our best exhibitions of the kind. There were many fine specimens of cabinet ware and upholstery, of the most finished and costly character, reaching to the full summit allowed by republican simplicity; bed quilts of all sorts and degrees of splendor; stuffed quilts and worked quilts in fine display, the bare contemplation of all which was sufficient to inspire in its full force the idea of comfort which the Spanish express by "sleeping full gallop." So numerous were these articles, with the various exhibitions of carpets, broadcloths, hearth-rugs, skilfully wrought ornamental needle work in rich figures and landscapes, and embroidery, and domestic skill of all imaginable sorts, exhibited in strong characters, that we relinquished all attempts to name or discriminate, but were obliged to estimate them by the half acre.

During the exhibition, several speeches and lectures were delivered. Besides the annual address, by Hon. **John C. Spencer**, Prof. **J. P. Norton**, and Dr. **Lee** gave lectures. Prof. N.'s lecture was given in the Court-house, to a large and attentive audience, on Wednesday evening. The general subject was the origin and composition of soils. Dr. L.'s was given in the large tent on the show-ground—the subject, the necessity of understanding the principles of agriculture.

In behalf of the Society, we would express our thanks to gentlemen in Canada and our sister states, who by sending their animals and articles, greatly contributed to the interest of the exhibition. The thanks of all are also specially due to those gentlemen from abroad who ably assisted as judges in awarding the premiums. We hope it may some day be in the power of our citizens to reciprocate the favor.

Sales at the State Fair.

The amount of property in live-stock, implements, &c., which changed hands at the late Show and Fair of the New-York State Agricultural Society, was quite large. We are now fully convinced of the correctness of the idea which we have frequently advanced, that the connection of the business of buying and selling, with these exhibitions, would be the most effectual means of sustaining them. An important matter, however, must be borne in mind: the exhibitions must be held at accessible points—places to which people, animals, and articles can be readily taken, comfortably accommodated, and readily taken away. On this point we shall have something more to say hereafter.

We have received no authentic accounts of the sales made at Buffalo, but will mention a few which happened to come to our knowledge.

Col. **Sherwood**, of Auburn, sold at auction twenty head of Short-horn cattle, (mostly young,) at prices from $40 to $130 per head. We understand they went mostly to the west. Mr. **Bell**, of Morrisiana, Westchester county, sold his Short-horn bull *Marius* to Judge **Harold**, of Clarke county, Ohio. This fine animal will prove of great value to the stock-growing region to which he has gone. Col. **Campbell**, of Schenectady, sold two Short-horn heifers to Mr. **Wolf**, of Coshocton, Ohio. Mr. **Cloon**, of Cincinnati, sold his Short-horn bull calf, but we did not learn the purchaser's name. We understand that **L. F. Allen**, Esq., sold some of his Short-horns, to go to Cuba.

There were probably other sales of this kind of stock, of which we did not hear.

Mr. **Sotham** sold several Herefords to go to Cuba, and some for other destinations. Devons sold readily, about fifty head of full bloods being disposed of. The two Devon bulls which took the two first premiums, (both bred by Mr. **Beck**, of Sheldon, Wyoming Co.,) were sold; the former to a gentleman in Michigan, the other to Mr. **Buckingham**, near Zanesville, Ohio. **S. G. Collins**, of Washington, Dutchess county, purchased eight head of Devons of Mr. **L. F. Allen**, of Black Rock. Mr. **Washbon**, of Butternutts, Otsego county, also sold several fine animals.

Several Ayrshire bulls and heifers were also sold, but we did not learn particulars.

In Merino sheep there were sales to a considerable extent. Col. Sherwood sold about seventy rams. Mr. Patterson, of Chautauque county, Mr. Jewett, and Mr. Campbell of Vermont, and others, made sales.

We are not apprised of many sales in horses; we understand that Mr. Blodgett's Morgan mare, which took the first premium in the class out of the state, was purchased by Mr. Geo. A. Mason, of Jordan. He is one of the owners of the Morgan horse *General Gifford*, and with this fine mare, and others, will soon show first rate stock. Mr. Blodgett's other mare, we are informed, was sold to a gentleman in Auburn.

In implements, the sales were large. H. L. Emery, of Albany, sold on the ground, and made contracts to the amount of $3,000. Large sales of plows and other implements were made by Ruggles, Nourse & Mason, Worcester, Mass., Starbuck & Son, Troy, E. J. Burrell, of Geneva, and Rapalje & Briggs, of Rochester.

Considerable contracts were also made for butter and cheese, seed grain, stoves, fabrics, upholstery, cabinet ware, &c.

Premiums Awarded

At New York State Agricultural Fair, Sept. 1848.

CATTLE—Short Horns.

Over 3 years old—Bulls—1. Z. B. Wakeman, Herkimer, $25—2. Robert Rone, Mount Morris, $15—3. Benj. Hewitt, Lewiston, $5. Cows—1. J. M. Sherwood, Auburn, $25—2. M. Whiteside, Mayville, $15—3. W. R. Foster, Batavia, $5.

Two years olds—Bulls—1. Robert Rone, $20—2. J. M. Sherwood, $10—3. W. R. Porter, $5 Heifers—1. Lewis F. Allen, Black Rock, $20—2. J. M. Sherwood, $10—3 to the same, $5.

Yearlings.—Bulls—1. Z. B. Wakeman, $15—2. J M. Sherwood, $10. Heifers—1. H. Schermerhorn, Schenectady, $15—2. W. R. Porter, $10—3, J. M. Sherwood, $5.

Calves.—Bulls—1. J. M. Sherwood, $10—2. L. F. Allen, $3, and Wash. Letters.

Heifers—1. Z. B. Wakeman, $10—2 L. F. Allen, $3 and Wash. Let.

HEREFORDS.—*Over 3 years old.*—Bulls—1. W. H. Sotham, Black Rock, $25. Cows—1. W. H. Sotham, $25—2d and 3d. Allen Ayrault, Geneseo, $15 and $5.

Two years old.—Bulls—1 S. W. Holmes, Chautauque, $20—2. P. Whitney, Niagara Falls, $10. Heifers—1. S. W. Holmes, $ 20—2d and 3d. W. H. Sotham. $10 and $5.

Yearlings.—Bulls—1st and 3rd. W. H. Sotham, $15 and $5—2. Allen Ayrault, $10. Heifers—1st and 2d. W. H. Sotham, $15 and $10—3. John T. Bush, Tonawanda, $5.

Calves—Bulls—1. W. H. Sotham, $10—2. Allen Ayrault, $3, and Wash Let. Heifers—W. H. Sotham, $10—2. Allen Ayrault, $3, and Wash. Let.

DEVONS.—*Over 3 years old.*—Bulls—1. J. W. Hamlin, Aurora, Erie county, $25—2. E. P. Beck, Sheldon, $15—3. E. C. Dibble, Batavia, $5.

Two years old.—Bulls—1. L. F. Allen, $20.

Yearlings.—Bulls—1. A. Woodruff, Sheldon, $15—2. M. Vernon, Stafford, $10—3. L. Hicox, Alexander, $5.

Calves—Bulls—1. H. N. Washbon, Butternuts, $10—2 E P. Beck, $3, and Wash. Let.

Cows.—*Over three years old.*—1 and 3 H. N. Washbon, $25—and $5—2. E. C. Dibble, $15

Heifers—*Two years old.*—1, 2, & 3. E. P. Beck, $20, $10, and $5.

One year old.—1 and 3. E P. Beck, $15 and $5—2. H N. Washbon, $10.

Heifer Calves—1. H. N. Washbon, $10—2. J. W. Hamlin, $3 and Wash. Let

AYRSHIRES.—*Over 3 years old.*—Cows—1. Robert Rone, $25. —2. J. S. Wadsworth, $15.

Heifers—*Yearlings.*—1. Robert Rone, $15.

NATIVES AND CROSSES BETWEEN IMPROVED AND NATIVES.—Cows—*Over 3 years old.*—1. Allen Ayrault, Geneseo, $20—2. Alfred Gale, Black Rock, $12—3. Aaron Taylor, Alden, $4.

Heifers—*Two years old.*—1. E. C. Dibble, $15—2. Alfred Gale, $10—3 E P. Beck, $3.

Yearlings.—1. Allen Ayrault, $10—2 and 3. M. C. Remington, Sennet, $8 and $3.

Heifer Calves.—1. M. C. Remington, $3—2 Alfred Gale, Wash. Let.

WORKING OXEN.—*Ten yoke from one town.*—G. Paxton and others, Eden, Erie county, $15.

Best Yoke of Oxen—*Over four years old*—1. B. Murphy, Leroy, $25—2. Henry Dixon, East Bethany, $15—3. Allen Ayrault, $6.

Steers—*Three years old.*—1. Allen Ayrault, $10—2. J. Freeman, Geneseo, $8—3. R. Humphrey, Victor. $5 and vol. Trans.

Steers—*Two years old.*—1. J. S. Wadsworth, $8—2. Allen Ayrault, $5—3. A. Brown, New Bethany, $3 and vol. Trans.

Steers—*One year old.*—1. B. Benedict. Alexander, $8—2. Elon Sheldon, Sennet, $5—3. L. Hicox, $3 and vol. Trans.

Steers—*Trained by boys under sixteen years of age.*—1. J. P. Benedict, Alexander, Silver Medal—2. Cleveland Allen, Black, $3 and Trans.—3. Abijah McCall, Aurora, Erie county, Trans.—4. L. H. Yates, Darien, (discretionary,) $2.

FAT CATTLE.—*Pair fat oxen over 4 years old.*—1. J. & F. A. Alberger, Buffalo, $30—2. Lyman Brainard, Attica, $20—3. L. Doty, Attica, $12.

Single Ox—*Over four years old.*—1. Edward Munson, Sennet, $15.

Fat Cow—*Over four years old*—1. Robert Hadfield, Sheldon, $15—2. Robert Fowler, Batavia, $10—3. Allen Ayrault, $6.

Pair Fat Steers—*Under four years old.*—1. Elon Sheldon, $15—2 B. Humphrey, Victor, $12—3. John Burns, Penfield, $8.

Single Steer—*Under four years old.*—1. Edward Munson, $10—2 Henry Dixon, $6.

Heifer—*Under 4 years old.*—1. Joshua Barnes, Buffalo, $10.

Grass-fed Cow—*Over 4 years old.*—1. Norman Kibbe, Westfield $15—2. Robert Hadfield, $10

FAT SHEEP.—Long-Wooled.—1 and 2. Wm. Terry, Mt. Morris, $10 and $7—3. George Swales, Sodus, $5.

Middle-wooled.—1. Robert Fowler, $10—2. F. W. Collins, Bloomfield, $7—3. L. F. Allen, $5.

MILCH COWS—James Brookins, Aurora, Erie county, $20.

HORSES.—For all work.—Stallions—1. Jas. M. Davis, Arcadia, for *Sir Archy Duroc*, $25.—2. N. Bailey, Henrietta, for *Magnum Bonum*, $15—3 John Henderson, Mendon, for *Morgan Eagle*, $8—4. Geo. Robinson, Lewiston, for *North Star*, 1 vol. Youatt's Treatise on the Horse.

Brood Mares—Jas. Brookins, 4th premium, Youatt.

Draught Horses.—Stallions—1. C. Schobey, Springport, for *Young Alfred*, $25—2. Philander Root, Westfield, for *Young Sampson*, $15—3. John Sybrant, Lockport, for *Sampson*, $8—4 R. B. Howland, Union Springs, for *Louis Philippe*, 1 vol. Youatt. In this class the committee *commend* the following horses, without giving the names of the owners: *Young Eclipse*, *Cornplanter*, *Grand Turk*, *Don Juan*, *Bucephalus-Victor*, *Western Lion*, *Prince Duroc*, *North-of-England*.

Brood Mares.—1. T. C. Love, Buffalo, $25—2. Alex. Hitchcock, Checktowaga, $15.

Blood Horses.—Stallions.—1. E. H. Ireland, Watervliet, for *Young Alexander*, $25—2. Wilson Little, Lodi, for *Culpepper*, $15—3. E. C. Dibble, for *Hornblower*, $8—4. S. W. Holmes, for *Bucyuis*, vol. Youatt.

COLTS—*Three years old.*—1. John D. Spinner, for *Sir Henry Eclipse*, $15—2. H. Whalen, Penfield, for *Alfred Matchless*, $10—3. Truman Hungerford, Watertown, vol. Youatt—4. Jesse Brown, Darien, vol. Trans.

Colts.—*Two years old*—1. S W. Holmes. Chautauque, $10—2. S. M. Burroughs, Medina, $5—3. M. L Hungerford, Watertown, vol. Trans.

Colts.—*One year old*—1. T. M. Pendergrass, Ripley, $5—2. C. R. Nichols, Darien, vol. Youatt—3. Samuel Cassidy, Royalton, vol. Trans

Filley.—*One year old.*—J. D. Van Allen, Black Rock, $5.

Discretionary premiums.—H. H. Norman, Perrinton, for gelding colt, diploma—John West, Brandt, for pair geldings, vol. Youatt—L. L. Van Vliet, Aurora, Erie county, Trans.—B. W. Pratt, Collins, for gelding, Transactions.

Matched Horses.—1 W. Morgan, Victor, $20 and diploma—2 E Stage, Wolcott, $15—3. Charles Axtell, Sodus, $10.

Geldings.—1 and 3. Stephenson and Brothers, Buffalo, $10 and diploma, and $6—2. J. S. Wadsworth, $8.

SHEEP.—Long-wooled—Bucks, *over two years old.*—1. Wm. Terry, Mt. Morris, $15—2 J. Terry, Mt. Morris, $10—3. George Swales, Sodus, $5

Bucks, *under two years old.*—1. John Wilkinson, Tonawanda, $15—2. L. F. Allen, $10—3. J. Bicknell, Aurora, $5.

Ewes.—*Pen of five over two years old.*—1. Henry Lyons, Lewiston, $15—2. Wm. Robinson, Westmoreland, $10.

Ewes.—*Pen of five under two years old.*—1 and 2, Thomas Terry, Mt Morris, $15 and $10—3. J. Bicknell, $5

Buck Lambs.—*Pen of five.*—1. J. Bicknell, $10—2. Thomas Terry, $5.

Ewe Lambs.—*Pen of five.*—1. E. P. Beck, $10—2. Thomas Terry, $5.

Middle-wooled Sheep.—Bucks, *over two years old.*—1 and 3. Z. B Wakeman, $15 and $5—2. James Parsons, Riga, $10.

Bucks, *under two years old*—1, 2 and 3. Z. B. Wakeman, $15, $10, and $5.

Ewes, *over two years old.*—1 and 3. Z. B. Wakeman, $15 and $5—2. James Parsons, $10.

Ewes, *under two years old*—1. Z. B. Wakeman, $15—2. James Parsons $10—3, Wm. Hotchkiss, Lewiston, $5.

Buck Lambs—*Pen of five.*—1. Z. B Wakeman, $10—2 James Parsons, $5.

Ewe Lambs.—*Pen of five.*—1. Z. B. Wakeman, $10—2. L. F. Allen, $5.

Merinos and their Grades.—Bucks—*Over two years old.*—1. D G. Lee, Darien, $15—2 E. C. Sherman, Middlebury, Wyoming county, $10—3. J. M. Sherwood, $5.

Bucks—*Under two years old.*—1. J. M. Sherwood, $15—2. E. C. Sherman, Middlebury, $10—3. J. W. Hyde, Darien, $5.

Ewes—*Pen of five.*—*Over two years old.*—1. E. C. Sherman, $15—2. R. Harmon. Wheatland, $10—3. Amos Chilcott, Hamburgh, $5.

Ewes—*Pen of five under two years old*—1. R. Harmon, $15—2 Amos Chilcott, $10—3 C C. Pierson, Avon, $5.

Buck Lambs—*Pen of five.*—1. Dexter Ewell, Alden, $10—2. R Harmon, $5.

Ewe Lambs—*Pen of five.*—1 Amos Chilcott, $10—2. R. Harmon, $5.

Saxons and their Grades—Bucks *over two years old.*—1. Chas.

Colt, Geneseo, $15—2. S. B. Crocker, Vernon, $10—3. Erastus Hurd, Royalton, $5.

Buck Lambs—Chas. Colt, $5.

Ewes—*Over two years old.*—1. Chas. Colt, $15—2 and 3. S. B. Crocker, $10 and $5.

Ewes—*Under two years old.*—1. S. B. Crocker, $15—2. Erastus Hurd, $10.

SHEPHERD'S DOG.—J. M. Sherwood, $5.

SWINE.—Boars—*Over two years old.*—R. B. Howland, (Berkshire,) $10—2. Augustus Raynor, Clarence, $5.

Boars—*Over one year and under two years old.*—1. C. R. Nichols, $10.

Boars—*Over six months and under one year old* —1. N. W. Briggs, Lewiston, $8—2. C. R. Nichols, $5.

Breeding Sows—*Over two years old.*—1. J. Winspear, Lancaster, $10—2. Samuel Loper, Clarence, $5.

Breeding Sows—*Over one year and under two years old.*—1. J. B. Stannard, Alexander, $10.

Pigs—*Under ten months old.*—O. Lathrop, Darien, $10.

POULTRY.—Dorkings, L. F. Allen, $3. Polands, H. A. Parsons, Buffalo, $3. Large Fowls, J. R. Lee, Buffalo, $3. Turkeys, Grosvenor Clark, Buffalo, $3. Muscovy Ducks and Small Ducks, N. S. Smith, Buffalo, $6. Guinea Hens, E. Bennett, Checktowaga, $3. China Geese, L. F. Allen, $3. African Geese, D. Redmond, Utica, $3. Wild Geese, H. A. Parsons, $3. Best lot of Poultry, H. A. Parsons, $10. Pigeons, G. Becker Buffalo, $3. Prairie Hens, Geo. F. Morris, Buffalo, $2. Birds from Van Dieman's Land, Geo. Cuthbertson, vol. Trans. and diploma.

RABBITS.—D. Redmond, diploma.

PLOWS.—*Best for general purposes* —1. John Vanbrocklin, Middleport, $10 and diploma—2. Homer Scott, Cambria—3. N. Starbuck and Son, Troy—4 H. Delano, (discretiony,) diploma.

PLOWING MATCH —1. David Cossett, Onondaga, $15—2 E Davis, Watertown, $12—3. Walden Eddy, Union Village, $10—4. N. Sanderlin, Colman's Tour—5. Homer Scott, Trans.

FARM IMPLEMENTS.—No. 1.—Farm Wagon.—R. Dickinson, Fredonia, $10 and diploma—2. Levi Newton, Attica, Col. Tour

Harrow.—H. L. Emery, Albany, $3 and dip.

Corn Cultivator.—1. E. J. Burrall, Geneva, $3 and dip.—2. Wm. Adams, Middleport, Trans.

Cultivator for general use.—E. R. Dix, Vernon.

Fanning Mill.—1. Rapalje & Briggs, Rochester, $5 and dip.—2. H L. Emery, Trans.

Horse Power.—1. Joseph Hall, Rochester, $5 and dip —2. H. L Emery, Trans.

Corn stalk Cutter.—1 G. Catchpole, Geneva, $5 and dip.—2. C. Burnett, Lyons, Trans.

Straw Cutter.—Rapalje & Briggs, $3 and dip.

Threshing Machine —1. Joseph Hall, $10 and dip.—2. H, L. Emery, Trans.

Corn and Cob Grinder and Crusher.—J. G. Case, Utica, $5 and dip.—2. H L. Emery, Col. Tour

Mowing Machine —Wm F. Ketchum, certificate. (This article received a diploma at the Society's exhibition, 1847)

Reaping Machine.———Hussey, certificate.

Grain Drill.—1. A. Palmer, Brockport, diploma—2. Rapalje & Briggs, (Pennock's patent,) certificate.

Corn Sheller and Cleaner —1. A. H. Stevens, Geneva, dip —2. E. J. Burrall, dip.

Wheat Cultivator.—1. (Ide's,) L. A. Morse, Medina—2. (Hinkston's) D. Hinkston, Clarkson.

Cultivator and Drill Combined.—J. W. Sherman & Co., Ontario.

Broad-cast Sower —J. W. Sherman & Co.

Double-guage Clevis.—1 J. Van Brocklin—2 Garret Erkson, Hobart.

Eave-Trough —Ira Ewing, Hume, certificate.

Buggy with Top.—1. P. M. Crandall, Canandaigua—2. Mr. Williams, Buffalo.

Farm Buggy.—Levi Newton

Grist Mill.—E. T. Butler, Norfolk, Conn.

Refrigerator.—Rapalje and Briggs.

Centrifugal Wind-mill.—(Judd's,) commended.

Portable Grist-mill.—(Fitzgerald's) Charles Ross, New-York, commended.

Improvement in Bed-Stead Fastenings.—J. D. Sanford, Bennington.

FARM IMPLEMENTS, No. 2—Horse Rake.—J. Swift, Clarkson, $3 and dip.

Ox Yoke —Rapalje & Briggs.

Single Harness.—1. J. M. Deveaux, Syracuse, Silver medal—2. W. C. Lockwood, Buffalo, diploma.

Bridle and Martingale —A. Culver, New-Fane, dip.

Dozen Axes.—Pratt & Co., Buffalo, $2 and dip.

Seven Axes.—L. & J. J. White, dip.

Churn.—Peter Fraer, Lewiston, $2 and dip.

Cheese press.—W. G. Brainerd, Rome, $2 and dip.

Anti-friction Press.—(Dix's) J. B. Holmes, Meadviville, Pa., diploma.

Grain Cradle.—H. L. Emery, $2 and dip.—2. L. D. Hathaway, North Boston, dip.

Hay Forks —(Partridge's) H. L. Emery.

Half-Dozen Manure Forks —H. L. Emery.

Half Dozen Grass Scythes.—Pratt & Co., Buffalo.

Agricultural Implements.—*Best and most numerous collection* —H. L. Emery, $20 and dip. Same, *made within the State*, Rapalje & Briggs, $20 and dip.

BUTTER.—*Best from five cows in thirty days.*—1. E. R. Evans, Marcy, $25—2. John Holbert, Chemung, $15—3. A. Woodruff, Sheldon, $10. *Best made in June* —1. Wm. Robinson, Westmoreland, $10—2. N. Van Ness, Marcy, Col. Tour.—3. John Holbert *Best made at any time.*—1. John Holbert,—2. A. Woodruff,—3. N. Van Ness—4. John Sill, Alden.—5, F. Williams, ———. *Best made by girls under twenty-one years of age.*—1. Lydia A. Van Ness, Mayville, silver cup, of the value of $10—2 Maria Van Ness, Mayville pair butter knives, $8—3 Martha Holbert, Chemung, tea spoons, $5.

CHEESE.—*Over one year old* —1. D. Newton, Hamburgh, $20 —2. E. & H. Colvin, Hamburgh, $10—3. Wm. Otley, Oaks' Corners, $5—4. Clark Avery, Perryville, Col. Tour.

Cheese.—*Under one year old.*—Silas Wheelock, Hamburgh, $15 2. E. & H. Colvin, $10—3. Talcott Francis, Colden, $5—4. Daniel Newell, Wales, Col. Tour.—4. Arnold and Littlefield, Clymer, Trans.

Cheese.—*Largest amount from one county.*—Geo. A. Moore, Buffalo, for Erie county.

Stilton Cheese.—H. Parsons, Guelph, Canada West, Silver medal and diploma

Diplomas for cheese were awarded to Geo. Hezlep, Trumbull county. Ohio, and to A. Krum and W. O. Green, Ashtabula county, Ohio.

Sugar.—1. Benj Gaus, East Bloomfield, $10—2. Frederick Williams, Gerry, $5—3 Edward Cheeney, Pavillion, Col. Tour.—4. Bennett Radford, Hanover, Trans.

Honey.—1. J. Hoag, Black Rock, $5—2. Michael McDonald, Aurora, Erie county, $3—3 E. & H. Colvin, Trans.—L F. Allen, (discretionary) diploma.

SILK & SILK GOODS.—Reeled Silk —Mrs P. Staats, Buffalo, $5 and dip.

Sewing Silk.—1. Clark Avery, $10 and dip.—Mrs. P. Staats, $5.

Cocoons —Mrs. P. Staats, $8.

Silk Stockings.—1. Mrs. E. Bishop, Attica—2 Mrs. P. Staats—3. A H. Sowle, Hamburgh.

Diplomas were awarded for raw silk, to A. H. Sowle—for silk shawl, to Mrs. Staats—and for silk umbrellas and parasols to J. Niele, Buffalo.

DOMESTIC MANUFACTURES.—No. 1. Woolen Blankets. —1. Mrs. G W. Patterson, Westfield, $6—2. Mrs. J. D. Van Allen, Black Rock, $4—3. Mrs Worden Mattison, Darien, $2

Flannel.—1. Mrs. Ruth Sherman, Eden, $6—2. Mrs. Sarah J. Darrow, Darien, $4—3 Erastus Hurd, Royalton, $2.

Woolen Cloth —1. Mrs. Ira McCall, Aurora, Erie county, $10 —2. Mrs. Clark Avery, $8—3. Eri Eggleston, Lancaster, $5.

Woolen Carpet.—1. J. J. Davidson, Warsaw, $10—2. Alonzo Harvey, Wales, $8.—3. Mrs. A. Heddington, Aurora, Erie county, $5.

Hearth Rug.—1. Mrs Jesse Ketcham, Black Rock, $5—2. Mrs. J. Horsford, Moscow, $4.—3. Mrs. Caroline Alexander, Buffalo, $3—4 Miss. Mary J. Green, Sheridan, $2—5. Mrs. Wm. V. Wilson, Ridgway, Trans.

Rag Carpet.—1. J. Hoag, Hamburgh, $5—2. Mrs Roscoe, Buffalo. $4—3. Horace Parker, Hamburgh, Trans.

Double Carpet Coverlet.—1. Mrs. C. Bristol, Attica, $5—2. Alonzo Havens, Wales, $4—3 J. J. Davidson, $3—4. Mrs. J. D. Van Allen, $2—5 McGreggor & Co., dip

Woolen Knit Stockings.—1. Thomas Thurston, Aurora, Erie county, $2—2. M. L. Hungerford, Watertown, Trans.—3. Mrs. Stetson, (aged 93,) $1 and dip.

Woolen Yarn – 1. Mrs. Ira McCall, $1 and dip.—2. Mrs. E. Bishop, Downing's Fruit and Fruit Trees.

Woolen Fringe Mittens—1. J. J. Davidson, $2—2. Alonzo Havens, Trans.

DOMESTIC MANUFACTURES, No. 2.—Linen.—1 Mr. E. Bishop, $8—2. Clark Avery, $5—3. A. A. Halleck, $4. Linen Diaper.—1. Mrs. E Bishop, $6—2. Isaac Allen, $4—3 Chester Clark, Skaneateles, $2.

Linen Knit Stockings.—1. Mrs. E. Bishop, $4—2. Thomas Thurston, Trans.

Cotton Knit Stockings —1. Samuel Hamilton, East Hamburgh, $2—2. Miss Jane Hoy, Attica, Trans

Linen Sewing Thread.—1. Mrs. E. Bishop, $2—2. Mrs Worden Mattison, Trans.—3. Chester Gridley, Sennett, (discretionary,) Trans.

Table Spreads —Edmund Nye, Newstead, $4.

Grain Bags.—E. C. Williams, Rochester, $2.

Cotton Sheeting —S. C. Jones, Rochester, dip.

Broad Cloth.—For various kinds, diplomas were awarded to A Rollins, agent Utica Steam Woolen Company.

☞ The premiums on a great variety of miscellaneous articles, are necessarily omitted.

Tomato Catsup.—Take a bushel of ripe tomatoes gathered when dry, and boil them three or four hours over a slow fire. Then add half a teacupful of salt, and of ground cloves and pepper each six ounces, and three quarts of vinegar. Then strain the whole through a fine sieve. Then boil one hour—cool and bottle. It must be boiled in a tinned vessel. No other will do. Remember that.

Speed of Hounds.—Youatt states that a fox-hound run the Beacon course, four miles, one furlong, and one hundred and thirty-two yards, in eight minutes. Sixty horses started with the hounds, but only twelve to run with them. Flying Childers had run the same course in seven minutes and thirty seconds.

THE FARMER'S NOTE BOOK.

Refuse Lime of Gas-Works.

We have received several inquiries in regard to this article, and have had various reports in regard to its efficacy as manure. It has frequently been stated that its effects on crops for the first season, at least, were unfavorable. The following remarks by Prof. JOHNSTON, from the Scottish *Quarterly Journal of Agriculture*, afford some explanation of the matter.

This refuse lime consists of a mixture of carbonate of lime with a variable quantity of gypsum and other salts of lime containing sulphur, and a little coal tar and free sulphur, the whole colored usually by a little Prussian blue. The following table exhibits the composition of two gas-limes which have been analysed in my laboratory, the one from the Edinburgh gas-works, and the other from the gas-works in Brick Lane, London. The first two columns show what they *were* when sent to me, the second two what they *will become* after long exposure to the air, after being made into compost, or after being thoroughly and for a length of time incorporated with the soil:—

COMPOSITION OF GAS-LIMES.

As they are.	Edinburgh.	London.
Water and coal tar,	12.91	9.59
Carbonate of lime,	69.04	58.88
Hydrate of lime (caustic,)	2.49	5.92
Sulphate of lime, (gypsum,)	7.33	2.77
Sulphite and hyposulphite of lime,*	2.28	14.89
Sulphuret of calcium,	0.20	0.36
Sulphur,	1.10	0.92
Prussian blue,	2.70	1.80
Alumina and oxide of iron,	——	3.40
Insoluble matter (sand, &c.,)	0.64	1.29
	98.69	99.82
As they will become.		
Water and coal-tar,	12.91	9.59
Carbonate of lime,	67.39	56.41
Hydrate of lime (caustic,)	——	——
Sulphate of lime (gypsum)	16.45	29.32
Sulphite and hyposulphite of lime,	——	——
Sulphuret of calcium,	——	——
Sulphur,	——	——
Prussian blue,	2.70	1.80
Alumina and oxide of iron,	——	3.40
Insoluble matter, (sand, &c.)	0.64	1.29
	100.09	101.81

This table shows that these gas limes differ much in composition, especially in the proportions of sulphur, or of the acids of sulphur they contain. This arises chiefly from the kind of coal which is employed in the manufacture of gas in different works. In Scotland, different varieties of cannel coal are very extensively employed; in London the better kinds of Newcastle coal are chiefly used, all of which either contain or give off more sulphur than the best cannel coals of Scotland.

The most marked difference between the two samples here analysed, is in the compounds called *sulphite* and *hyposulphite* of lime. The latter of these substances dissolves readily in water, and its presence in such very different proportions satisfactorily accounts for the very different effects which have followed from the application of gas-lime to the lands in different districts. The rains dissolve the hyposulphite and the sulphuret, and carry them down in too great quantity to the roots of the young corn; and hence the complaints of some that the gas-lime has killed their wheat, while others have found, when applied as a top-dressing in a similar way that it greatly improves their crops of corn. Unless its composition be satisfactorily ascertained, therefore, unless for example, it be found that water dissolves very little of it—there will always be a degree of risk in applying it directly to the land while any corn crop is growing. There may not be the same danger in putting it between the turnip or potato drills, and afterwards ridging up the land in the way in which quick lime is applied in many districts."

Upon the whole, Prof. J. concludes that the refuse lime of gas-works ought not to be thrown away, and that it may be used with advantage, 1st, upon mossy or peaty land, and upon naked fallows; 2d, in composts in which, by the action of the air it will tend to be converted into gypsum, and will produce a similar effect to that substance; it might be useful in expelling insects from the soil.

Crops in Alabama.

Our provision crop is most abundant; the season has been fine up to the period of maturity of the corn crop; since that time, say 15th July, the rains have been heavy and frequent—so much so that the bole worm made its appearance in the cotton, in a very destructive form, by the last of July; earlier by 15 days than heretofore. The crop of cotton never presented a finer appearance than it did the present season, at the period of attack by this fell destroyer. The crop promised fair for 3,000,000 bags. Of what number it may really turn out, I shall at this moment offer no speculations. I have heard some planters say, the crop is more than half eaten up, referring of course to their own; I have seen some crops that will not make a bale to 10 acres, and I hear others make the same remark. So far as we have information the destruction is general. We have not as yet any information in reference to the matter either east or west, out of Alabama. We are now in the midst of a cloudy wet spell of weather, favorable to the propagation of the worm, whose name is *legion* already. N. B. CLOUD. *La Place, Macon Co., Alabama, Aug.* 15, 1848.

Washing Machine.

I observe in the August number of the *Cultivator*, an inquiry as to the best washing machine, with a request for information from those who have had actual experience. The annexed figure represents one which I have used in my family for *five years*, and which is *immeasurably* preferred to all others which have been tried or heard of. Its original cost was five dollars—high enough, considering the simplicity of its construction. During these five years it has been in weekly use, and the total amount of all the repairs have not cost twenty-five cents. A boy ten years old can work it with facility; and my wife thinks it requires not more than a third or a quarter of the labor needed by the use of the best "*wash-board*"—while it does not chafe nor wear the clothes in the smallest degree.

It is worked by an alternating motion of the handle or lever A, which turns on the central hinge or pivot B, pressing the perforated board which swings like a pendulum within the trough, by means of the connecting

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* This includes a small quantity of cyanide and sulphocyanide of calcium, which are soluble in water, and are present, as all these compounds of sulphur are, in variable quantity.

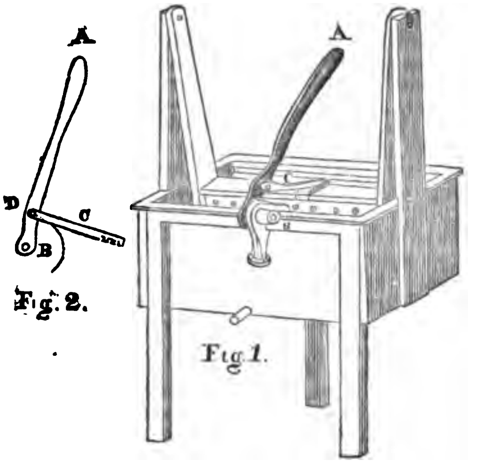


Fig. 2.

Fig. 1.

Washing Machine.

bar C, against the grooved side of the trough beyond. Fig. 1, is the whole machine; Fig. 2, the handle and bar C, detached, showing the notched end of the bar, for regulating the space for the clothes. This handle and bar are made of cast iron. The perforated board with its suspending frame are easily lifted out, when necessary.

The box or trough must be made very strong, for the pressure exerted against its side is enormous. At the first motion of the handle, it is only five or six times as great as the strength of the person working it; but as it approaches a horizontal position, the perforated bed moves slower and slower, the motion of the handle continuing uniform, and hence the "purchase" constantly increases as the handle becomes more horizontal. This will be better understood by observing the circular dotted line in figure 2, which marks the course of the pivot D.

Another great advantage of this machine is, that one's weight is thrown *upon* the handle, and it hence possesses all the advantages of the application of strength which exist in rowing a boat.

I have sometimes heard ill-bred men sneer at the attempt to save the labor of women. Such men should be invariably compelled to cook their own dinners and wash their own shirts. "But what's the reason women can't do so much work as they did forty years ago?" say you. "They do more work now than they did then," say I, "for women had not then become, to use the words of Dr. Alcott, such 'slaves to the everlating din of pots and kettles' as they now have." You are fond of good cooking and their hands must provide it, and in many other cases the increasing wants of the day are loading them with heavy burdens. Therefore you must provide them all the labor-saving facilities you can, if you expect to be set down as gentlemen. Besides, a good washing-machine may give you a comfortable clean shirt where you now from necessity wear a dirty one. B. X.

Potato Disease and Erysipelas.

I wish to call attention to the fact, that with the growing diseased condition of the potato rot, from year to year, there is a corresponding growth of a disease in our country, which bears a striking similitude, (as far as the comparison can be brought to bear,) to that which in potatoes is commonly called the *rot*.

This disease is frequently called *Erysipelas*, by our country physicians, because in many cases it has symptoms which appear to favor that complaint—but in the majority of cases there is a virulence of attack and decay of that part of the system in which it makes its first appearance, that marks it as a new and malignant disease.

I believe I may safely say that potatoes constitute one-third of the food consumed in the country, and among the laboring people they are usually eaten three times a day throughout the year.

Now if in fact the principle of the decay called the rot, possesses the potato at the time the blight makes its appearance among the tops; awaiting only the presence of a certain degree of heat and moisture to finish its work, does it not follow that if they are eaten in this condition as a common article of food, the poison or secret principle of decay will pervade the system and may produce the disease before mentioned?

I have been tempted to make this communication with the view of drawing attention to the matter—and am in hopes that the suggestions I have made will either prove fallacious or serviceable. ISAAC S. BEERS. *North Salem, Westchester Co., N. Y., Aug.* 28, 1848.

Cattle on the Highways.

It was with no common feeling of pleasure that I perused an article in your Cultivator of this month, by Mr. Bacon, of Elmwood, on the subject of preventing animals from running at large in the highway.

Hundreds of times have I been so annoyed by this nuisance that I have often contemplated addressing you an article on the subject. Mr. Allen and Mr. Bacon have anticipated me. I can only hope their suggestions may be carried out in every state in the Union. How truly does Mr. Bacon depict the evil of highway pasturing. Has not many a farmer felt it, particularly those who keep all their stock on their own farms.

I could give you a list of grievances that I have endured from the evil in question, laughable for one to read, it might be, but it hath tried my patience wonderfully, ere now.

I never think of leaving a gate open five minutes at a time; for if I did, I should be pretty sure of finding sundry animals of the swine order husking my corn or digging my potatoes. Instead of beautiful green grass growing along our highways, those interesting animals plow the sides of the road one year, and the next we reap a famous crop of smart weed Things are a little better here than they used to be, but we want much reformation yet.

Soon after coming to this neighborhood, I thought seriously of leaving it, for, not having a disposition to quarrel, I did not know but that I should be literally driven off my farm after a while. One of my neighbors had several cows who got possession of the spot before my front gate, for a barn yard at night; and though quite profitable, it was by no means agreeable, as I had to go every day with the wheelbarrow to "*remove the deposites.*" The hogs of one basked under the shade of our trees, and the geese of another bathed themselves in our brooks and running streams; the latter fairly got possession, for a time, of one field.

But enough of this. I do not wish to state my own grievances, but to beg of you, if you have any love for improvement and refinement among the farmers, to raise your voice against the occupation of the highways by animals.

Show me a country where every farmer keeps his animals on his own premises, and you will show me a thrifty set of men. Let me ride or walk through a country where my path is impeded by grunters, sissers, looers, and neighers, and I will venture to call its inhabitants a slovenly set; and will henceforth report them to the Cultivator for correction.

I have been a subscriber to your valuable paper for five years, and hope to be so for twice five longer. I cannot refrain from saying again, do attend to this matter. H. C. W. *Putnam Valley, N. Y., August.*

Rearing Calves.

The lecture of Prof. **Simmonds**, alluded to in another place, was followed by a discussion in relation to the "best way of rearing cattle from the time they are dropped till they are a year old." As might have been expected, there was not a unanimity of opinion on the question; some, especially those who reared cattle chiefly for beef, were in favor of letting calves suck their dams for the first six months. Others preferred a different course. Mr. **Turner**, a noted breeder of Devon cattle, said it was the custom in his neighborhood to let calves suck for the first ten days, and at the end of that time they were taken from the cow, and three quarts of new milk given to each, twice a day. This was continued two or three weeks, according to the strength of the calf; at the end of that time they withdrew a portion of the new milk, and gave the animal some skim milk; in addition to this they gave it oatmeal, hay, and turneps, taking care that it should be kept perfectly clean, with a free circulation of air, and well littered. Two or three weeks after this the calf eats hay or grass with avidity; the new milk is withdrawn, and skim milk given. It was continued five or six weeks longer, and then the calf fed heartily on cut hay and oatmeal. It was kept in during the winter months, and then on the first sunshiny season they gave the calf the free use of his limbs. They then turned him into a good pasture, and was shifted from one to another as convenient; for he held as an essential point, that it was necessary for every young animal during the first year of its existence, to be fed on different kinds of food. The case of calves and lambs was similar in this respect with young children, and every other animal, (laughter.) His own calves were carried on in this way, being taken in at the latter end of October or the beginning of November. The yard was kept clean and well littered, and the animal had a little hay, and chopped straw, and turneps. In the winter months the animal might have mangel-wurtzel. Thus it was kept during the winter months; and when spring arrived, they turned it into the first good pasture they could, and all trouble was then at an end. He held it to be most essentially necessary that animals should not be forced.

Mr. **Pelham** gave calves new milk for the first fortnight; after that he gave skimmed milk, to which he added for each calf daily, a quarter of a pound of flaxseed, a quarter of a pound of bean meal, (by way of restoring the casein of the new milk,) and a quarter of a pound of molasses. He found this a satisfactory and not an extravagant plan.

Mr. **Barrett** said he left the calf with the cow four or five days, and then removed it to the calf pens, which are constructed so as to be very cool in summer, and sufficiently warm in winter. He preferred pens, thinking that when young calves are tied up it irritates them and produces scouring. When taken from the cow, he gave three quarts of new milk morning and evening for four weeks; at three weeks old a very small quantity of crushed linseed and chaff; at a month he added "sweet" skim milk, two quarts, reducing the new to two quarts, and increasing the quantity of linseed, chaff, and adding fine pollard; at six or seven weeks old he added skim milk, and then half a pint crushed linseed, and more chaff and pollard. The skim milk he continued as long as there was any to spare from the younger calves. He found it useless to give a very liberal allowance of new milk to a calf after six weeks old; he thrives better by using sweet skim milk, and he accounts for it in the following manner: The new milk satisfies his appetite, and he does not consume a sufficient quantity of linseed and chaff for his age. If a calf scoured, which it seldom did, he gave the following: One ounce of salts in half a pint of warm beer, stopping their milk at morning feeding time, and reducing the quantity the next three times of feeding; and should the attack be more severe, and not give way to this treatment, he boiled the milk for a few days. Should the scouring be attended with much pain, indicated by the calf groaning and looking back at its flanks, he gives one ounce of linseed oil, and takes away a small quantity of blood, according to the age of the calf, say from four ounces to eight ounces, from a week to eight weeks. Heifers should calve in April, as the grass in May forces their milk and lays the foundation for their becoming good milkers.

Mr. **Shaw** said he was himself a dairy farmer, and sold a good deal of milk. He never suckled more than eight weeks, and did not give after that more than a quart a day; but he gave them oil-cake, or cut hay, to induce them to eat. By these means he got them to eat at three weeks old. He found that by giving them linseed to eat for a certain period—not too long, as he considered linseed to be a bad thing when too long continued—that a change for oat cake was the best thing.

Mr. **Mechi** thought the same remarks applied to the rearing of a calf as to the child of human beings. If the Almighty had provided the parent with food containing the best materials for forming the perfect animal, which no one could for a moment doubt, and if they were desirous of following nature, they must, if they removed the young animal from its mother, give it those things which come as near as possible to the mother's food. They all knew that when they reared a child they gave it food assimilating in its nature to its mother's food, as near as possible; and the same laws applied to the young of the lower animals as to the young of man. They should give food which would ensure the growth of bone, fat, and muscle. He saw an attempt to follow this principle in the food recommended by preceding speakers, who had been enlightening them. Some gave oatmeal or nitrogen; others, linseed or carbon; and they ought also to give oatcake for the phosphates. Depend upon it, they must not rely on any one meal; but they must so contrive their food that they may give the phosphates, the nitrogen, and the carbon. Whatever they found necessary to give to grow a good strong man, they would require to be given, in order to rear a strong, healthy, and valuable calf.

Rust in Wheat.

Editors Cultivator—My experience of the present season induces me to make some observations upon the above subject. On the 21st of October last, I sowed three and one-half bushels of wheat, sold me by Messrs. A. B. Allen & Co., N. York, as the genuine "white-flint," of "Wheatland." I presume it was as represented; being as large and handsome grain as I ever saw. It was scarcely as large, however, as I had anticipated, its weight being just 60 lbs. per bushel.

On the 22d of October, I sowed 6½ bushels North Carolina Red wheat, about 58 lbs. per bushel. The soil was as nearly the same as could be, with a similar preparation, and like quantity of seed per acre. The native wheat was cut the 15th of June; the New-York the 20th; the latter being six days later than the former. In a month after their appearance there was a perceptible difference in the two, the northern having broader leaves, and being more green and vigorous. It retained its superiority throughout the growing season; the stalks being larger, and the heads decidedly superior. I expected much from this. But some fifteen days before cutting, I perceived the rust in it, and before harvesting it was materially injured. Although much shrunken, its yield nevertheless was 32 per cent. more than the native wheat. The latter had not, that I saw, a single stalk of rust throughout the lot.

Now, it is to this, to me, inexplicable fact, that I desire to call your attention. Why was it that on the same soil, under precisely similar circumstances, that the northern was so much affected, while the native was entirely free from this disease. My reading has hitherto led me to suppose the rust to be some contingency of the season. Am I to believe so still, or shall I attribute it to the seed sown, and brought with it from its northern home? If the latter, may I not expect the disease to be generated at each successive sowing.

Permit me to invite your notice to another matter incidentally brought out here. From the foregoing dates given, a difference of six days in the ripening of the two kinds is perceived. May I expect the White-flint" as it acclimates, to become earlier, like most of the northern fruits introduced into the south, or will the native retain its superiority on this point? Your views are solicited. Will. H. Wills. *Brinkleyville, N. C., Sept.* 5, 1848.

Draining.

As the subject of underdraining, and the manner of constructing drains is justly engaging the attention of many, I wish to state a plan which I think in the absence of better materials, answers a very good purpose. Every farmer who has loose stones on his farm, has the materials at hand; while at the same time he may be ridding his land of a great detriment to its proper cultivation. Dig a ditch from two to two and a half feet deep, sixteen inches wide at the bottom; lay stones six inches in diameter on each side, which leaves a water course of four inches in the centre. Take stones of larger dimensions and cover over. By drawing a quantity of stones along the line of the ditch, a selection can be made, and after placing some on each side of the top-stones, should they not fill out to the sides of the ditch, the remainder can be thrown in at random, on which can be strewed some shavings or straw, and then covered. A team and plow will greatly facilitate the covering operation. Flat stones would be preferable for covering could they be obtained, which would also prevent the necessity of digging so deep. W. Ansley. *Rushville, N. Y., August,* 1848.

Sawdust Charring and Clay Burning.

Having been repeatedly applied to for instructions for charring sawdust, and also for burning clay subsoils, containing little or no organic matter to act as fuel, I take the occasion of Mr. Whitmore's paper at the Royal Agricultural Society, as lately reported by you, to bring the two questions together, and let them answer each other. Charred sawdust is a form of charcoal particularly adapted for manure, but the difficulty is to keep so light and loose a substance from falling into the fire and burning away, if put on sparingly, or if heaped up, to prevent this from filling and choking the air-way, and thus extinguishing the fire. The clay subsoil of stiff soils, turned up and burnt, not only manures by yielding its alkaline and other fertilising ingredients, but at the same time both deepens and loosens the soil; three benefits of great importance. But such subsoils, rising in heavy clods. as contain very little combustible matter, require fuel to keep them burning; which is not always at hand, nor to be had cheap. When sawdust is within reach it is just the thing; the clay will supply the knobs to build up with, and support the sawdust with air way between; the skill of the burner being exercised in so proportioning and arranging them, that the sawdust shall fall in fast enough to keep up the fire, and moderate the air way to the charring point, without filling in so as to extinguish it. And this may be done by varying the arrangement according to the proportions. Where clay burning is the object, one ton of sawdust would probably suffice for 100 tons of clay; and where the object is to char the sawdust, I think with skilful management, two tons of clay would do for one ton of sawdust, considering that the clay does not consume and will shrink but little, whilst much sawdust falls in through the hollows, as it becomes charred; where clay is not at hand sods of peat may be used instead. Both are improved by the charcoal being disseminated through the substance of the clay, which may be easily done with the shovel before burning and while the clay is soft, but this may hardly pay for the labor unless in garden culture. There is yet another method of charring sawdust for manure, on a different principle; that is, by the heat produced in slaking lime. If wet sawdust be heaped up with fresh burnt lime, the wet will be drawn out by the lime for slaking, and the heat produced may fire the heap, and burn the sawdust to ashes; but if the proportion of sawdust to lime is very great, keeping the stones of lime far apart, the heat of slaking will be too much weakened by dispersion to produce fire. By keeping a medium, then, and covering well in from the air, we may attain a point at which fire will be produced in the heart of the heap, but prevented from breaking out to destroy the charcoal. The medium must depend more or less on the quality and dampness of the sawdust; but for that of fir, in its ordinary damp state in the saw-pit, by the changes of weather, we might try 20 bushels to one of lime, laying one fourth as a bed, mixing one-fourth of the wettest with the lime, and covering in with the remaining half. If the fire break through, more sawdust might be heaped on, and so much more charred; or if no more, the holes may be stopped with earth in the usual manner.—*Ag. Gazette.*

Diseases of Animals.

Red Water in Cows.

In perusing your journal of the present month, (August,) I learn that there has been a great mortality among cattle, resulting from a disease called red water. This name is given to it from the red color of the urine, being only a symptom of functional derangement. The *ounce of nitre!* recommended in the article alluded to, would act as a diuretic, and make the powerful animal weak; it might also change the character of the urine; at best it would only be treating symptoms, and could not possibly contribute anything towards the cure. I allude to the chronic form of this disease. The skillful surgeon will immediately recognize a derangement of all the functions, a vitiation of every secretion, and a loss of vital power. Hence we lay it down as a fundamental principle, that those who treat symptoms alone, never cure disease, and the animal often dies, a victim to the *treatment,* instead of the malady. This form of disease is considered to be epidemic, yet all animals are not likely to be attacked, although exposed to the same atmospheric influence; for, if there is a perfect physiological equilibrium between the solids and fluids, the nervous energy, and circulating system, then the animal is safe. The proper treatment of the disease is, to excite the liver and intestines to action, *which are in a torpid state;* next, to change morbid action; and lastly, to tone up and invigorate the whole system.

I was tempted to make these few remarks, from the consciousness that this malady will yield just as readily as any other to the proper remedial agents. You quote from Cole's Veterinarian, that red water is most common in cows of weak constitution; a general relaxation; poor blood, &c.; that the urine is brown and tinged with yellow. This shows that morbific matter is abundant in the system and nature is making an effort to rid herself of the offending matter, and will do so unless you interfere by the use of remedies opposed to the vital principle. Many of the drugs used at the present day, such as copper, antimony, corrosive sublimate, calomel, nitre, glauber salts, and laudanum, would kill a well animal, whatever they might do to the diseased.

You then enmerate the change in color, from yellow to brown, and lastly, resembling coffee grounds.

This shows that symptomatic fever, or constitutional irritation has set in; the cure in this stage of the disease would be very difficult.

In a few days a natural diarrhœa comes on, and the animal is better.

This is the manner in which nature attempts the cure; the diarrhœa carries off a large amount of morbific matter, which could not remain in the system without producing serious consequences, "*and the animal often gets well.*"

Here nature speaks in a language too plain to be misunderstood; we must open the sluices of the body. One pint of linseed oil should be given, and its operation assisted with injections of warm soapsuds, each injection containing a table spoonful of powdered ginger; after the bowels are evacuated, the distemper powder, sold by Stimpson, Reid & Co., 26 Merchants' Row, Boston, is the only article we use in this form of disease, and with remarkable success. The animal should be allowed a tea for a few days, composed of boneset and pennyroyal, one ounce of the former to two of the latter, infused in half a bucket of boiling water. The diet should be light and nourishing, and of the very best quality. G. H. Dadd, M. D. *Boston, August* 14, 1848.

Heaves in Horses.

In 1845, I had a horse which was worthless, for use. I was frequently told that he could not live, but he is now alive, and as well as ever. The cure was a simple one. Take the young shoots or buds of the white pine, say in May or June, boil them, and when the liquor is cold, give the horse a junk bottle full once a day, for ten days. John D. Spinner. *Herkimer, N. Y., August*, 1848.

[Our correspondent has omitted to tell what should be the relative quantities of the "shoots or buds and water, and does not tell how much the "junk bottle" should hold. It seems necessary to know what should be the strength of the decoction, and how much should be given to the horse at a dose.—Eds.]

Disease in Seeep.

I have taken the liberty to ask some information as regards a disease that prevails among my sheep, through which I have this summer lost about 20 ewes and weathers. The disease commences with a discharge of pus from the nostrils, the animal falls away in flesh, has a dry cough, and the discharge is often accompanied with blood. After a time, (some linger two, three, and sometimes four weeks,) the head becomes so clogged that the animal dies. I have seen from half a pint to a pint of putrid matter run from the nose after death. On opening the head no grubs or worms can be seen, but the brain is highly inflamed.

Some of the farmers, formerly of western New-York, say it is the rot in the head, and that the sheep were often diseased in the same way where they formerly lived, but they can tell me of no remedy. I have followed Mr. Jewett's plan of injecting snuff-water up each nostril. I have fed them quantities of tar, flour sulphur in salt, rubbed the poll with spirits turpentine, and all without any visible effect.

The large Leicestershire buck that you saw with me when I passed through Albany last summer, is now attacked, and I am afraid, (unless you can inform me of a remedy,) I shall lose him. The sheep are all in good condition when attacked with the disease. Richard Ferris. *Onondaga, Ing. Co., Mich., Sept. 9th*, 1848.

[The disease above described is new to us. We hope some of our correspondents will be able to give a remedy.—Eds.]

Foot-Rot in Sheep.

We published on page 247, of the *Cultivator* for 1846, a statement of some very interesting and important facts, relative to the application of a remedy for this formidable disease, which had been tried with signal success on the extensive flocks of Humphry Howland, Esq., of Cayuga county, N. Y. He has since authorised us to add, that a continued application of the remedy has wholly removed the disease, and that not a solitary case remains; and so simple and effectual is the remedy, that had it been applied at the commencement of the infection of his flocks, it would have saved him several thousand dollars.

For the benefit of such of our readers as may not have noticed the statement two years since, we give its substance below:—

This remedy is now in use for the second season, during which time the rot has diminished from thirty per cent. to one per cent., in a very extensive flock, or only one sheep is now lame where thirty were formerly. Other flocks in the neighborhood, to which the remedy has not been applied, are as badly affected as ever.

The remedy consists in mixing flour sulphur with the salt given to the sheep, in a proportion just sufficient to discolor slightly the salt, or about one-twentieth part. They are regularly and constantly fed with this mixture the season through.

The disease being considered as allied to the itch, the sulphur mixed with oil was also applied to the backs of the sheep immediately after shearing, and whatever effect this mixture may have had upon the rot, the grease was found to have increased the weight of wool about a quarter to half a pound per head. The practice of applying oily substances externally to sheep, and the beneficial results, have been elsewhere known, and this experiment further establishes the advantage.

The cost of these materials for large flocks, may be lessened by purchasing in quantity in New-York city. Flour sulphur is often retailed at twelve and a half cts. per pound; in New-York it costs three dollars per hundred, and fifty cents additional, as freight, brings it to only three and a-half cents per pound. Lard and lamp oil are costly as external applications; but train oil, or oil of the true whale, is only about 32 cents per gallon in New-York, if bought by the barrel, or $10 per barrel; this would be enough for 2,000 head of sheep, or half a cent per head;—the sulphur mixed and the labor of application would be about two cents per head.

A preserved heart.—Dumas, the noted chemist, states that the heart of Richard Cœur-de-Lion is preserved at Rouen. It shows scarcely a trace of organic matter, but is composed almost entirely of incense in a state of powder or small particles—odorous powders being the principal substances used for embalming.

Curculio.—The Cleveland Herald says, "a neighbor has pursued the practice of shaking his plum trees every morning, and gathering his insects to destruction. His trees have now but few stung fruit upon them." We have pursued the same practice with equal success; but the insects being unusually abundant, we are compelled to collect them three times a day.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications have been received since our last, from Wm. Todd, P. Elithorp, G. H. Dadd, M. D., W. Ansley, B. X., A Subscriber, F. Holbrook, Isaac S. Beers, W. H. Wills, H. C. W., W. R. Burnett, C. C. Munsell.

Books, Pamphlets, &c., have been received as follows:—Speech of Hon. E. B. Holmes, on the River and Harbor bill, from Mr. H.——Seeds of a "beautiful plant," known in Wisconsin, as the "Polar Star," "Arrow Head," &c., from J. G. Knapp, Esq.——"Visit to the principal Vineyards of France and Spain, by Jas. Busby, Esq.," an old book with a new title page, the journey having been made in 1831, and the book issued in 1835, from the publisher.——"The Farmer's Cabinet," 12th vol., from Josiah Tatem.——"Catalogue of the Ashton Nurseries of Thomas Hancock," near Burlington, N. J.——"Lime and Marl: their Agricultural uses, with explanations of their properties and management," &c., by James Hyatt, Chemist of the Mount Airy Ag. Institute——"Report of Committee on Public Lands, on draining the Ever Glades, in Florida," from Hon. J. D. Westcott, Jr., U. S. Senate.——"Catalogue of the Hamilton Nursery, Canterbury, Orange county, N. Y.," from C. Hamilton, proprietor.

Imported Merino Sheep.—Mr. A. L. Bingham of Cornwall, Vt., passed through this city in August last, with twenty-one Merino sheep, nine of which were purchased of Fes. Rotch, Esq., of Butternuts, Otsego county. Six of these, a ram and five ewes, were imported by Mr. R. from France in 1846. The remainder of the lot, except one lamb, were imported from the same country the present season, by J. A. Taintor, Esq., of Hartford, Ct. These sheep are of the stock noticed by us in our December number of last year, (vol. iv. p. 383.) They are of great size, and have generally robust and strong frames, indicating hardiness of constitution; their wool is remarkably thick on the body, giving great weight of fleece, of a quality similar to what is usually produced by the Merinos in this country. Under proper management, we think they are calculated to improve many of our flocks.

Durhams for Vermont.—Mr. Bingham also purchased of Mr. Rotch, five yearling Durham heifers. Mr. B. designs to breed these to his Hereford bulls, of which he and his brothers have several fine ones, from the herd of Messrs. Corning and Sotham, formerly kept in this vicinity. Mr. Bingham is deserving of much credit for the spirit he has evinced for the improvement of the live-stock of Vermont.

South Down Sheep.—The advertisement of Mr. McIntyre, in relation to his flock of South Downs, is worthy the attention of all who are disposed to make a trial of this valuable breed, or who may wish to procure animals to cross with their present stock. Mr. McI. has bred his sheep with the greatest care, and their general excellence is well known. His late purchase, (to which allusion is made in the advertisement,) comprises some first rate animals, so that the character of his flock will be kept up.

Fumigating Plum Trees.—In our last number mention was made of the practice of Caleb Hall, of Blue Rock, Ohio, in keeping the curculio from his fruit trees. In a letter since received from Mr. J. L. Cox, of Zanesville, the process alluded to is more fully described. "Mr. Hall," (it is said,) "melts the brimstone in an iron pot, and woolen rags are then dipped in it. Once in five or six days, between sundown and dark, he fumigates the trees by means of a pole, to which is attached the rag of burning brimstone. He begins as soon as the blossom falls from the tree, and continues while there is any sign of the insects."

"The Pie Apple."—We published a notice of a variety of apple by this name in our volume for 1847, p. 85. The writer of that notice, Mr. S. Worden, of Oswego, sent us a box of the apples in August last. They had been packed in saw-dust for several days, when they reached us, and were over-ripe, which prevented their real qualities from being ascertained. It is a very handsome apple—fair, and of good size; and we should think would, when taken at the proper time, rank among the best-flavored apples of the season. Mr. Worden informs us that it loses much of its flavor by being kept beyond its time. It is said to have been brought from one of the Eastern states about thirty years ago, by Mr. Moore, whose father raised it from seed. Mr. W. states that some have given it the preference over the Early Joe.

Annual Exhibition of the Albany and Rensselaer Horticultural Society.—The second annual exhibition of this society, was held at the Old State Hall, Albany, on the 14th and 15th of September. Considering the entire want of plums in this vicinity, the present season, the display of fruits was good. The show of flowers was fine, and in tastefulness of arrangement was superior to any former occasion. Vegetables were abundant, and excepting the very common fault of being over-grown, were of a quality creditable to the producers.

We noticed fine samples of new and choice kinds of pears from S. C. Groot, of Schenectady, J. J. Thomas, Macedon, Mr. Rankin, Newark, New-Jersey, D. T. Vail, and H. Vail, Troy, Judge Harris, Judge Parker, and Dr. Wendell, of Albany.

There were some good samples of peaches from Mr. Rankin, Mr. Thomas, and Mr. Vail.

Fine specimens of apples were shown by Mr. Prentice, Dr. Ward, Mr. Vail, Mr. Kirtland, and others. V. P. Douw, Greenbush, Mr. Rathbone, Kenwood, H. Vail, Troy, and Mr. Rankin, of New Jersey, showed very good samples of choice kinds of grapes. Melons of several kinds were shown by D. T. Vail, Dr. J. Wilson, Dr. Wendell, and Mr. Kirtland. The *Bokhara* melon, shown by the latter gentleman, was pronounced of very superior quality.

The principal contributors of flowers were Messrs. Wilson, Menand, Newcomb, of Pittstown, Rens. county, D. T. Vail, Dr. Wendell, Mr. Douw, of Greenbush, and the president of the society, Mr. Rathbone. The latter gentleman presented a "floral design," in the form of a candleabra, composed of a great number of different kinds of flowers, most beautiful in appearance, which elicited much admiration. The bouquets of Mr. Wilson were also, (as they deserved to be,) much praised.

Among the vegetables we noticed a superior kind of cabbage, from John H. Willard, Troy. Some of the heads weighed nearly twenty pounds each. The quality is *first-rate.*

Exhibition of the Rensselaer County Ag. Society.—The annual exhibition of this Society took place at Troy, on the 20th and 21st of September. The display was good, though unfavorable weather on the first day, probably prevented as full a competition as there would otherwise have been. There was a numerous array of cattle—working oxen, cows, heifers, and several bulls. Geo. Vail, Esq., had some handsome specimens of his noted herd of Durhams. There was also some good stock from Mr. Haswell, of Hoosick, and J. H. Willard, of Troy. We particularly observed a young cow of remarkable points for the dairy, offered by Jacob Y. Kip, of Brunswick. We noticed some very fine fat pigs, five months old, from R. C. Derick, of Pittstown. There was a large show of implements, of fine workmanship. The in-door departments were well filled. The show of fruits was hardly as good as last year; but there were some fine specimens of apples, pears, and grapes, from Messrs Vail, Warren, and others, of Troy, and Briggs, of Schaghticoke. There was a large display of fabrics and fancy articles.

This Society has leased a piece of land for its exhibitions, which has been enclosed with a high fence; and a large building has been erected for the reception of articles to be shown. Permanent fixtures have also been put up for the cattle. The pens for sheep and swine, are of the movable fence, made by Mr. Coons, of Lansingburgh. They are very convenient, and when not in use are taken down and put under shelter. The enclosure is spacious, and the whole arrangement good. The plan is worthy of adoption by other societies.

Death of an Old Sheep.—In our volume for 1846, page 147, there is a notice of a Merino ewe owned by J. S. Pettibone, Esq., of Manchester, Vermont, which was then in her nineteenth year. Mr. P. has several times sent us wool from this sheep. He informs us that she is now dead, having had one of her legs broken, from which injury she did not recover. Mr. P. says "she was 21 years old, and at the time she met with the accident, bid as fair to live another year as at any time for the last three years. I send you a lock of her wool, which I think is as fine as she ever produced, showing that it has not grown coarse with age." The wool is certainly very handsome for what is called Merino; but we are inclined to think the fact of the fleece not having deteriorated in fineness, is rather an exception to a general rule. The sheep alluded to is a remarkable instance of the longevity to which the Spanish sheep is capable of reaching. We have been induced to refer to it particularly from the fact, that the statement of a competitor, in the class of Merino sheep, at the late fair, was doubted by some, viz., that one of his sheep, (a ram,) was 16 years old.

Seedling Apple.—We have received from Mr. Job T. Whipple, of Union Village, Washington County, a sample of apples produced by a tree raised, as is stated, by the father of Mr. W. It is a large, fair apple, handsomely flecked and striped with red. Its quality is very good, though generally a little over-ripe at this this time, (Sept. 21.) We should think it well worthy of propagation. Mr. Whipple thinks so highly of the kind, that he has grafted it to a considerable extent, and has some trees of the kind for sale. The apple was shown at the late exhibition at Troy, and was approved by several pomologists.

☞ We have received from Salmon Hutchinson, Ithaca, N. Y., a sample of seedling peaches, which originated with him. We are sorry to say that they were so much decayed when they arrived, that it was impossible to decide on their quality.

Illustrated Natural History.—Edited and compiled by Dr. A. B. Strong, author of the "American Flora." The design of this work is to furnish popular descriptions of the various subjects of natural history, accompanied by illustrations. It is published monthly by Green & Spencer, 140 Nassau street, New-York, at one dollar a year.

Notices of New Publications.

The American Flora.—This is a monthly periodical, the third volume of which is now being issued. Each number contains sixteen pages of letter-press, printed on fine paper, and four colored engravings of plants or flowers, taken from nature; accompanied by descriptions giving their properties, uses, methods of propagation and culture. The work is handsomely "got up"—is edited by Dr. A. B. Strong, and published by Green & Spencer, 140 Nassau street, New-York, at three dollars a year in advance.

British and Foreign Medico-chirurgical Review.—This excellent work, of which we have frequently spoken, continues undiminished in value and interest. It is issued quarterly in London, and is republished in New-York, by R. & G. S. Wood. Each number contains 275 pages, comprising a view of the latest discoveries in medicine and surgery. It is a work of the highest reputation in its kind, and should be in the hands of every member of the faculty. Terms three dollars a year.

American Journal of Science and Arts.—The number for September is before us. It is filled with valuable matter, among which we notice the following articles: On the Anomalies presented in the Atomic volume of Sulphur and Nitrogen; with remarks on Chemical Classification, and a notice of M. Lamont's Theory of Binary Molecules; by T. S. Hunt: A new Method of extracting Pure Gold from Alloys and from Ores; by C. T. Jackson: Description of Shells found in Connecticut, collected and named by the late Rev. J. H. Linsley; by Augustus A. Gould, M. D.,—with many other interesting articles. Much credit is due the editors of this work, Professors Silliman and Dana, for the ability with which it is conducted. Published at New Haven, on the first day of every second month, at $5 per year.

Journal of Agriculture and Transactions of the Highland and Agricultural Society of Scotland.—Published quarterly, by Blackwood & Sons, Edinburgh and London. This is one of the ablest of the periodicals devoted to Agriculture. It is, in fact, two separate works—the different pages belonging to each, being issued under one cover, and at the end of the year are to be formed into their respective volumes of Journal of Agriculture, and Transactions of the Highland and Agricultural Society of Scotland. The contributors are some of the best-informed and most distinguished in Scotland and England; such as Prof. Johnston, John Towers, Thos. Rowlandson, Alfred Gyde, James Duncan, J. H. Fennell, and many of the best agriculturists in Great Britain. The Transactions consist of prize essays and original papers brought out by the Society, and are of high character in a scientific and practical view.

Drying Fruit.—Apples are usually dried on scaffolds, or strung on twine, (a bad practice for several reasons,) but where many apples or peaches are intended to be dried, some kind of a dry house is generally prepared for the purpose. These are of various forms and constructions. The most simple is made by erecting over a kiln a rude log or board building, leaving the flue and chimney outside, so as to supply the flue with fuel without entering the building, and to permit the smoke to pass off on the opposite side. Inside, in addition to the kiln, a number of shelves are set up, to receive the fruit. In some of these a small stove is introduced, and the kiln omitted, or only used occasionally. A better kind are made of frame work, weather-boarded, or of brick, with a stove and shelves, are used.

The best dry house should be constructed of frame-work, boarded, and the sides and ends, except a doorway, filled with drawers, with slat bottoms, to push in and pull out, from the outside, like the drawers of a bureau. They need not be more than three or four inches deep. A large quantity of fruit may thus be dried in a small room heated by a stove.

The Honey-Bee in America.—The native tribes of America say that hive-bees were originally introduced among them from Europe, but when and by whom none of them could tell. The only name they have for them is the " white man's fly," and they regard their wider diffusion as indicating the encroaching progress of the white settlers. It is said that the first planters in New England never saw any bees there; that the English introduced them to Boston in 1670; and that since then they have spread over the whole continent. Washington Irving has written an account of the progress which the hive-bee is making westwards in America; and about sixty years ago, when Bartram inquired how it was that westward, among the Creek Indians, he had seen no bees, he was told by a Dr. Grant that there were few or none west of the Isthmus of Florida, and but one hive in Mobile, which had been lately brought from Europe, the English supposing that there were none in the country, not finding any when they took possession after the Spanish and French. Bartram was also assured by the traders that there were no bees in West Florida, which he thought extraordinary and almost incredible, since they were so numerous all along the eastern coast, from Nova Scotia to East Florida, even in the wild forest, as to be thought by the generality of the inhabitants aborigines of that continent. At the present time the honey-bee is abundant throughout the United States, both as a denizen of the forest and a dependant on man. Generally speaking, the settler in the backwoods prefers the precarious but luscious supply afforded by those swarms which have deserted man, and taken up their abode in fissures of rocks or hollows of trees, to the more regular, but less abundant supply, from hives of his own.

The author of *A Tour on the Prairies*, says the Indians regard the bee as the harbinger of the white man, as the buffalo is of the red man; and say that in proportion as the bee advances, the Indian and the buffalo retire. The wild bee is said to be seldom met with at any great distance from the frontier. When the honey-bee first crossed the Mississippi, the Indians, with surprise, found the hollow trees of their forests suddenly teeming with honey; and nothing can exceed the greedy relish with which they banquet for the first time upon this unbought luxury of the wilderness. At present, the honey-bee swarms in myriads in the noble groves and forests that skirt and intersect the prairies, and extend along the alluvial bottoms of the rivers.—*Useful Insects and their Products*, by J. H. Fennell.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Sept. 20, 1848.

FLOUR—Genesee per bbl. $5.87½a$5.94—Extra brand, $6.25a $7.25

GRAIN.—Wheat, Genesee, per bu., $1.34—Southern, $1.15—Corn. 56a60 cts.—Rye, 68c.—Oats, 34a35c.—Barley, 75c.

BUTTER—Best Goshen, per lb., 20a25c.—Western, dairy, 14 a 16c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl, $13a$13 50—Prime, $6a6.50

PORK—Mess, per bbl., $12.75a$13—Prime, $9.75.

LARD—in kegs, per lb., 9a9½c.

HAMS—Pickled, per lb., 5½a6c.

HEMP—American dew rotted, per ton, $135a$140.

HOPS—First sort, per lb., 4a5c.

TOBACCO—Virginia, per lb., 2½a6½c.

COTTON—Upland and Florida, per lb., 5½a7½c.—New Orleans and Alabama, 5a8½c.

PLUM STOCKS.

THE subscriber offers for sale 100,000 good strong seedling Plum Stocks.

Messrs. King and Ripley, and other nurserymen who have used these plum stocks, prefer them to the imported or any other sort ever tried by them.

None less than 15 inches high will be put in.

Price $10 per 1,000—$90 for 10,000, delivered in New-York.

Also, a large collection of Fruit and Ornamental Trees, Grape Vines, &c. Apply to SAMUEL I. GUSTIN, Newark, N. J.

Oct. 1—2t.

FRUIT TREES.

THE Subscriber now offers for sale at his nursery in Canterbury, Orange County, N. Y., a general assortment of Fruit Trees, embracing all of the most valuable varieties of fruit, with many that are new and Rare. And having obtained them all from the best sources, or from bearing trees of well known varieties, and proved a large proportion of them on his own grounds; and the budding and marking of all his trees being done with his own hands, assisted by his Son; and devoting his entire attention to fruit trees only, he believes them to be equally correct with those of any other establishment.

His stock of APPLES, embracing many thousands, is large and very thrifty, at $20 per 100.

Trees of small size for the Western States, at low prices.

With grafts of all the varieties at low rates.

See Catalogue, which will be sent to all *post paid* applicants.

Also for sale, 30,000 SEEDLING PLUM STOCKS, one year old, and 5,000 one year old BUCKTHORN PLANTS.

Canterbury, Oct. 1, 1848.—1t. CHARLES HAMILTON.

PRINCE'S LINNÆAN BOTANIC GARDEN AND NURSERIES, *Flushing, N. Y.*

WM. R. PRINCE & CO. Successors of Wm Prince, and sole proprietors of his great collection, offer the largest and choicest assortment of

Fruit and Ornamental Trees and Plants,

To be found in America; and will transmit *Descriptive Catalogues* to all post paid applicants desirous to purchase.

The choicest varieties of fruit which are scarce elsewhere, are here extensively cultivated, and applicants will not be disappointed. Every desirable fruit enumerated by Downing, Manning, Kenrick, and Hovey, and in the Catalogues of Europe can be supplied. Of the finest varieties of Pears, 50.000 trees can be supplied, of which 15,000 are of bearing age on both the Pear and the Quince. Purchasers are solicited to visit the establishment and judge for themselves; but the same attention will be paid to the selection for all distant correspondents. The prices are as low, and mostly lower than trees of equal quality can be elsewhere obtained. And above 500 varieties of Fruit Trees, and a much larger number of Ornamental Trees can be suppled, that cannot be obtained elsewhere in the Union, except in a few casual instances.

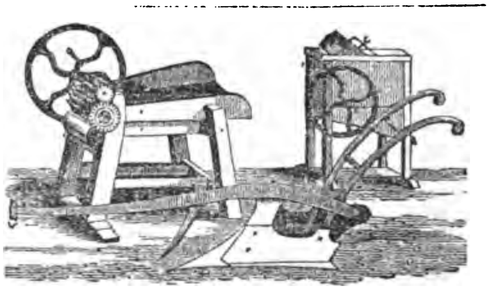
Every premium for Roses and Strawberries, was awarded to us by the Long Island Horticultural Society.

A Wholesale Catalogue will be sent to all venders.

The transportation expense to the West is now moderate, and the Agents' Receipt will be sent to each purchaser, which will prevent the possibility of loss. Cash or a reference can be sent with the order, by those who are strangers to us.

N. B We caution the public against a spurious use of our name and title by a man named Winter, who never purchased any trees from the late Wm. Prince, and is calculated to deceive many.

Oct. 1.—1t.



JOHN MAYHER & CO.,

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New-York, which will be sold at lower prices than they can be purchased at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co.'s celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

FRUIT TREES.

THE Subscribers are now ready to receive orders for superior TREES viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, &c, from their new nursery. Trees all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention

WILSON, THORBURN & TELLER.

☞ Also, a fine assortment of choice varieties of the Pear on Quince stocks, or dwarf pear trees.

Albany, Oct 1, 1848—2t.

NEWBURGH NURSERY—FRUIT TREES.

THIS Nursery contains a general assortment of fine thrifty trees, consisting of

Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Raspberries, Gooseberries, Strawberries, &c.,

Of the most approved kinds. Also many that are new and rare, of recent introduction.

All orders (post-paid,) will be carefully attended to by the proprietor—Catalogues sent on application.

CHA'S. DOWNING.

Newburgh, Orange County, N. Y., Oct. 1, 1848.—2t.

PARSONS & CO.

INVITE the attention of dealers and amateurs to the large and excellent stock of trees at their COMMERCIAL GARDEN & NURSERY, at Flushing near New-York.

The personal attention of the proprietors to the propagating department, and their possession of well arranged specimen grounds, enable them to ensure the correctness of the varieties which they cultivate.

Their Fruit department contains of APPLES, 210 varieties, of which among the best are,

Early Harvest, Strawberry, Autumn Bough,
Maiden's Blush, Willis' Sweeting, Fameuse,
Porter, Gravenstein, Sturner Pippin,
Tower of Glamois, Northern Spy,
Yellow Bellflower, Baldwin, Hubbardston Nonsuch,
Herefordshire Pearmain, Peck's Pleasant, Swaar,
Rhode Island Greening, Newtown Pippin,
White Seeknofurther, &c., &c.

PEARS, 180 varieties, including,
Bartlett, Madeleine, Summer Francreal,
Beurre d'Amalis, Dix, Fondante d'Automne,
Louise Bonne de Jersey, Duchesse d'Angouleime,
Easter Beurre, Columbia, Beurre d'Aremberg,
Lawrence, Vicar of Winkfield, &c., &c.

CHERRIES, 70 varieties, including,
Black Eagle, Downer's Late Red,
Black Tartarian, Elton, Bigarreau,
Early Richmond, Mayduke, Belle de Choisy, &c., &c.

PLUMS, 75 varieties, including,
Imperial Gage, Jefferson, Yellow Gage,
Washington, Smith's Orleans, Duane's Purple,
Ickworth, Imperatrice, Lucombe's Nonsuch, &c.

PEACHES, 80 varieties, including,
Crawford's Early, Crawford's Late,
Early Tillottson, Early York, George 4th,
Late Admirable, White Rareripe, Royal George,
White Imperial, Heath Cling, Old Mixon Cling, &c., &c.

NECTARINES, 14 varieties, including,
Boston, Violet Hative, Red Roman, New White,
Hardwick's Seedling, &c., &c.

APRICOTS, 14 varieties, including,
Early Peach, Moorpark, Schuyler's Large,
Dubois' Golden, Large Red, &c., &c.
Also, Quinces, Grapes, Figs, Almonds, Walnuts,
Raspberries, Currants, Strawberries,
Esculent Roots, &c.

THE ORNAMENTAL DEPARTMENT, comprises all the most desirable Ornamental, Deciduous and Evergreen Trees and Shrubs, Vines, Creepers, &c., in some 800 varieties, many of which are new, and rare, and valuable for Arboratems.

Also, Roses, Hedge Plants, &c.

Catalogues furnished *gratis* on application by mail at Flushing, or personally at 10 Pine street, New-York.

Oct. 1.—1t.

BRANCH NURSERY OF PARSONS & CO.,

At Brighton Depot, near Boston.

THE Proprietors invite the attention of their Eastern friends to their grounds at Brighton, to which they have transferred a large assortment from their establishment at Flushing.

The entire success of the trees transplanted there the past season enables them to recommend this stock with confidence.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

Late A. J. Downing & Co.

THE undersigned beg leave to inform their patrons and the public in general, that their stock of

FRUIT & ORNAMENTAL TREES, SHRUBS, &c., &c.,

For Autumn planting, is unusually large and thrifty, especially PEARS, PLUMS and APPLES; of most of the standard varieties of the latter there are several thousand trees, three and four years old, of large size suitable for orchard planting, together with a general assortment of Cherry, Peach, Nectarine and Apricot trees. Also, Grape vines, small fruits, &c., &c.

Pear on Quince Stocks.

Portugal Quince Trees, standard height, 6 ft,	$1 00
" " quenouille " "	1 00
Angers (*true*) " " " "	1 00
Smaller trees of the above, price,	0 50

Hedge Plants.

Buckthorn, 2 year old, per 1000,	$ 8 00
Osage Orange, " per 1000,	12 00

The ORNAMENTAL DEPARTNENT is full and complete; for particulars see Catalogue, a new edition of which is just issued for 1848 & 49, and will be sent to all post-paid applicants.

Orders respectfully solicited, and will receive prompt attention, which will be carefully packed and shipped to any part of the Union or Europe

N. B. Catalogues to be had gratis of the agent in N. Y., Geo. G. Shepherd, 143 Maiden Lane, and at the office of "The Cultivator," Albany.

A. SAUL & CO.

Highland Nurseries, Oct. 1, 1848.—2t.

SENECA LAKE HIGHLAND NURSERIES.

FRUIT and Ornamental Trees, Flowering Shrubs and Plants; Roses, Dahlias, Strawberries, Greenhouse plants, Hothouse plants, Annual Flowering plants, &c, &c., cultivated and for sale at these Nurseries.

5,000 Trees, of the new and celebrated DOUSE or HAWLEY, which for flavor, size and productiveness, is the unrivalled Fall Apple. Also, the Early Joe and Northern Spy.

Trees carefully packed, so as to be safely forwarded to any part of the country.

All packages put on board the Steamboats on Seneca Lake, free from charge. Priced Catalogue, describing the advantages of purchasing trees at this location, and much Horticultural information, furnished gratis, to all who apply, if by mail, post paid.

E. C. FROST,

Catharine, Chemung county, N. Y., Oct. 1.—1t.

FRUIT TREES FOR SALE.

THE subscriber has for sale at his nursery, (Fishkill Landing, Dutchess county, N. Y.,) a general assortment of Fruit Trees, embracing many of the most valuable kinds of Apple, Cherry, Peach, Plum, Pear, Nectarine and Apricot trees; and a large quantity of the market fruit trees, among which are the Frost plum, Napoleon Cherry; Rhode Island Greening, Newtown Pippin, and Baldwin apple; Isabella grape vines and Orange Quince Bushes.

Also a splendid lot of the EARLY GOLDEN APRICOT Trees. This Apricot still maintains its high reputation, having withstood the severe frost of last Spring, which killed the fruit buds of several kinds of the Peach and Apricot trees. These trees have been sent within the last year, to all latitudes of the United States; and from the extreme parts they give the most promising prospects of success.

Also, a few thousand Fir and American Linden Trees.

Trees will be furnished on as low terms, and packed in as careful a manner, as at any other establishment of the kind. When desired, small trees will be supplied at corresponding prices. Catalogues sent to all applicants.

CHARLES DU BOIS.

Fishkill Landing, Oct. 1, 1848.—1t.

TO NURSERYMEN, ORCHARDISTS, AND PLANTERS.

THE subscriber offers for sale at his nurseries, Plymouth, Mass. Pear, Quince, Cherry, Plum, Apple, and Dwarf Apple, (Paradise) stocks, suitable for budding next August, or for Spring grafting. Also, the following ornamental tree stocks, from two to three feet high and stout: viz. Mountain Ash, Oak, Hawthorn, Elm, Spanish Chestnut, Horse Chestnut, Birch, Beech, Ash, Norway Maple, Sweet Brier, Larch, Scotch fir. (2 ft) Silver fir, (1ft.) Spruce fir, (1 ft.) Norway fir, (1 ft) Arbor Vitæ, (15 in.)

Also, 50 of the finest sorts of PEARS, standard and dwarf.

Priced list sent to post paid applicants.

Oct. 1.—4t. B. M. WATSON.

IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

A New Manure, Warranted Superior to any Other.

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, $5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city. April 1—tf.

TO SEEDSMEN AND NURSERYMEN.

ORDERS will be received by the undersigned for the purchase and transmission of seeds, plants, shrubs and trees, from the most celebrated French Nurseries, on moderate terms and with despatch. LIVINGSTON, WELLS & CO., 10 Wall-st.
New-York, Sept. 1, 1848.—2t.

NURSERY OF J. J. THOMAS.

Macedon, Wayne Co., N. Y.

THIS Nursery now contains many thousand fine trees, of large, handsome, and thrifty growth, consisting of Apples, Pears, Peaches, Cherries, Apricots, &c., of the best standard sorts, as well as the finest only of new and newly introduced varieties; all of inferior merit being rejected; *and in no case are any propagated for sale except those thoroughly proved in bearing.*

When purchasers desire, selections of the best for affording a regular succession of fruit through the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y.

MERINO SHEEP FOR SALE.

HAVING arrived at a point in which I desire to reduce my stock of Sheep, I have therefore concluded to sell about 600 Merino Sheep this fall, which have been bred with great care, and are inferior to none in the United States—200 of which are half bloods, from the importation made by Mr. Taintor. Nothing need be said to recommend them, for they recommend themselves.
Cornwall, Sept. 1, 1848.—3t. A. L. BINGHAM.

ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, *Six or Eight thousand bushels of* LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address G. M. BIGELOW,
May 1, 1848—6t. Cabotville, Mass.

HUDSON AG. WAREHOUSE & SEED STORE,

FURNACE BUILDINGS, HUDSON.

THE Subscriber offers for Sale, all kinds of FARMING IMPLEMENTS and TOOLS, GARDEN and FIELD SEEDS, on as good terms as at any other establishment.

Horse Powers, single and double Threshing Machines, with or without Separators, Plows of all kinds, including D. Prouty & Co's Centre Draft; sub-soil and side-hill Plows, Road Scrapers, Cultivators, Seed Sowers, (Pratt's), Straw Cutters, of various patterns, Kendall's Churns, Endless Chain Dog-Churns, Corn and Cob Crushers, Iron Rakes, of all sizes, Hay Forks, Manure Forks, Shovels, Spades, garden and field Hoes, Grant's Fan Mills, Scythes and Snaths, Ox Yokes and Bows, Ox Balls, Bull Rings, Grain Cradles, Grass Hooks and Shears, Bill Hooks, Scythe Stones, &c &c.
F. A. GIFFORD.
Hudson, May 9, 1848—5t*

GRANT'S PATENT FAN-MILLS.

I. T. GRANT & CO., Junction, Rensselaer county, N. Y, continue to manufacture these celebrated mills. They have been awarded five first premiums at the New York State Fairs and the Fairs of other States, and in no instance has any other mill of the kind received a premium over them. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the last year they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains as before. Our *agents* are H. L. Emery, Albany; G. S. & F. A. Willis, Pittsfield, Mass.; Parsons & Dickinson, Springfield, Mass., John Mayher & Co., 195 Front Street, New-York; Berj. Myers, Newark, N. J.; S. & E. Hasbrook, Stone Ridge, N. Y.; James S. Brown, Newburgh, N. Y.; H. Warren, Troy; Hugh Van Alstyne, Kinderhook; S. & M. Peckham, Utica; E. Whitman, Jr., Baltimore, Md.; Fitzhugh Coyle, Washington, D. C; Denslon & Webster, Savannah, Geo. Address I. T GRANT & Co., Junction, P. O., Rensselaer county, N. Y., by whom all orders will receive prompt attention. Sept. 1—4t.

NOW landing from ship Aglare, a very superior cargo of Patagonian Guano. Price $35 per ton, for all quantities exceeding 1,000 lbs. Apply at the New-York Agricultural Warehouse and Seed Store, Nos. 189 & 191 Water-street, New-York.
July 1, 1848.—2t. A. B. ALLEN & Co.

BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent. lighter* than the common plow, and work well *on all soils, in all conditions.*

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, *rough or smooth*, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction.

For sale *wholesale and retail* (*warranted*) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers. E. J. BURRALL.
Geneva, April, 1848—6t.

GREATEST IMPROVEMENT OF THE AGE.

Smith's Lever Drill.

Patented November 4, 1846, to H. W. SMITH.

THE advantages of this machine as fully established by use and experiment, are

1.—A saving of from two to three pecks of seed per acre.

2.—An equal distribution of any given quantity of seed, covered at a uniform depth.

3.—A saving of labor; a boy and team, with this machine, can complete from 8 to 10 acres per day; and the surface of the soil is left in such a position that it does not encrust, and undergoes a constant course of natural cultivation by the action of every shower, so that the gases and atmosphere readily penetrate,—hence,

4.—The grain is not so liable to be thrown out by frost.

5.—It stands firmer and stronger, and is not so liable to be injured by rust or the fly.

6.—Where these machines have been used, the saving of seed and increase of product, amounted to from 20 to 25 per cent.

The great improvement in this machine, over all others of the kind, is its simplicity, durability and economy, and the facility and certainty with which it can be *set* or *altered* by a regulated *index* and *guage* to drill or plant any given quantity of grain per acre, at any given depth.

These machines are now being made at Syracuse.

County rights to manufacturers sold on reasonable terms.

For further particulars address the undersigned, post paid at Syracuse. C. MASTEN,
Aug. 1, 1848.—3t.

THE PLOW, THE LOOM AND THE ANVIL.

AN Agricultural Journal published *monthly* in Philadelphia, (as successor to the Farmer's Library,) by G. B. ZIEBER & Co., edited by J. S. SKINNER & SON.—Terms, five copies for $10, two copies for $5, and three dollars for a single subscription. The object of this Journal, as its title indicates, is to discuss and disseminate, with zeal and earnestness, not only the philosophy and practice, but also the *political economy* of American Agriculture. It is designed to convince the Farmer and the Planter, that encouragement and preference of American over foreign labor, in every brach of industry for which we have the climate and materials, is a question which interests *the cultivators of the soil above all classes of people:* and to show that what American Farmers most need now, is not so much instruction how to *use the plow*, but how and by what policy we can have the greatest number of thriving consumers, demanding here at home, the products of the plow. In a word, "THE PLOW, THE LOOM, AND THE ANVIL," is designed to show that, instead of a precarious dependance on ever fluctuating and uncertain *foreign* markets, as recommended in reports and speeches published and widely disseminated by the General Government, and by the New-York State Agricultural Society, our best and surest reliance under a wise policy, would be, on the *home market*, by giving fair and steady encouragement to *American Industry*, employed, and consuming at home, the products of American Husbandry.

In this earnest undertaking to propagate, what is believed to be the true conservative doctrine, the Editors have the countenance and good will of many of the most highly gifted and patriotic men of our country. Mr. Skinner is giving to it all his time and abilities, and relying on its success exclusively, as his only means of support. All he asks is that those who wish it success, will *subscribe at once;* and those who are opposed to his views will read attentively and judge as impartially as fixed opinions will allow.

Of all improvements in practical agriculture, and in the structure of the implements employed in it, the reader will be kept advised. The editors solicit "aid and comfort" from all the friends of domestic industry, *in all its forms:* not to be rendered as to the "agitators" in favor of free trade, in hard money, gratuities by thousands and hundreds of thousands, but by two neighbors in a V, and by clubs of five in a X.

Now among the oldest of the Editorial Fraternity, he will feel greatly obliged to any one of them who will give this one insertion, as it is kindly done here. Editors and Publishers take the risk of the mail. No formality is necessary, except to say—J. S. Skinner & Sons, or G. B. Zieber & Co., Philadelphia. $5 enclosed for two subscriptions. A. B.———Post Office.
C. D.———Post Office.
Or, in this wise $10 for five subscribers and their address."

VALUABLE BOOKS

For sale at the Office of the Cultivator:

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CIDER MILL SCREWS.

THE Subscribers are prepared to supply orders for Cast Iron Cider Mill Screws and boxes complete.

Also, Steam Engines, Mill Gearing, and Castings in general.

JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver Street, Albany.
October 1, 1848—2t.

LARGE STOVES.

THE Subscribers are making the largest and best Stoves in market for Dairymen, Planters, and Hotel keepers—to which their attention is invited.

JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver st., Albany.
Oct. 1, 1848—3t

BLOODGOOD NURSERY, *Flushing, L. I.*, KING & RIPLEY,

PROPRIETORS of this well established nursery, offer for sale one of the largest varieties of good size

Fruit and Ornamental Trees,
Evergreens, Grape Vines,
Raspberries, Strawberries,
Flowering Shrubs and Hedge Plants,

Ever offered to the public.

Orders sent to them at Flushing, L. I.; or 244 Pearl st., New-York, (where Catalogues may be obtained gratis,) will receive prompt attention, and the trees packed with much care for transportation. Oct. 1—1t.

SOUTH DOWN SHEEP.

THE Subscriber offers for sale, several very superior Southdown Rams and Ewes, (from lambs to 4 years old,) some of which are imported animals.

Great care has been taken, and no expense spared to raise up this stock to a high standard. He has lately added to his former stock, several fine animals, many of which were selected personally by their former owner, from some of the most noted flocks in England.

Applications may be made either personally, or by letter, addressed to J. McD. McINTYRE, Albany.

Oct. 1.—3t.

TO PLANTERS.

WANTS a situation as Farm Overseer, a Scotchman, about 30 years of age, *Married*, who has a thorough practical knowledge of Agriculture, in all its branches, as also the management of stock of all kinds. Has had very extensive experience in the management of Short Horn Cattle and Sheep, has been about two years in America Can produce the most unexceptionable testimonials as to character and abilities; and would endeavor steadily to forward his employer's interests.

Apply, *post-paid*, to A. W., office of the Cultivator, Albany.
Oct 1—1t.*

GUANO.

A Superior lot of Patagonian Guano just landing—put up in tight casks, thus preserving all the ammonia—for sale at two cents per lb., at the Agricultural Warehouse of S. C. HILLS & CO. 43 Fulton St., New-York.

Oct. 1, 1848—3t.

TO NURSERYMEN, GARDENERS AND HORTICULTURISTS GENERALLY.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes by a faithful attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References—A. J. Downing, Esq. and A. Saul & Co., Newburgh; H. Reid, Murry Hill, N. Y., and Elizabethtown, N. J.

GEO. G. SHEPPARD,
113 Maiden Lane, New York.

N. B Orders for Russia Mats, for Budding or Packing, immediately supplied.

New-York, Oct. 1, 1848.—2t.

FRUIT AND ORNAMENTAL TREES.

THE Subscribers wish to inform their customers and the public, that they have now on hand, and will offer for sale during the ensuing planting season, a large stock of Fruit Trees, consisting in part of,

50,000 *Apple Trees, suitable for orchard planting,*
20,000 *Pear do do do*
15,000 *Cherry do do do*
15,000 *Peach do do do*

Besides large quantities of APRICOTS, PLUMS, NECTARINES, QUINCES, GRAPES, and all the small fruits. The trees are vigorous and healthy, and the collection comprises all the leading standard sorts, as well as nearly all the rare and choice ones recently brought to notice. All have been propagated under the personal supervision of the proprietors, whose care, experience, and entire devotion to the business, give the public a reasonable guaranty for accuracy. A large share of attention is paid to the culture of GARDEN TREES, and the stock of

Apples on Paradise Stocks,
Pears on Quince, and
Cherry on the Mahaleb,

Is probably the largest in the Union All the famous native fruits of Western NewYork, can be supplied genuine, propagated from bearing trees. Immense quantities of young trees suitable for distant transmission can be supplied.

The stock of Ornamental Trees is very large, and quantities for planting streets, public grounds, &c., or to dealers, can be furnished very low.

Hedge Plants can also be furnished by the 1,000, or 10,009 comprising

Norway Spruce, Arbor Vitæ, Hemlock,
Red Cedar, English and American Thorn,
Buck Thorn, Osage Orange, Honey Locust,
Privet, &c.
50,000 *Plum Seedlings, 1 Yr. old,*
30,000 *Quince, of the best sort for Pear stocks.*

Besides large quantities of Rhubarb, Asparagus, Sea Kale, and all other articles in the nursery line, at reduced rates.

Trees and plants will be packed in the best manner, and shipped to any part of the Union.

A new catalogue for 1818 and 49' is just published, and will be sent gratis, to all postpaid applicants. Wholesale catalogues sent when desired.

Orders should be forwarded immedintely. Address,

ELLWANGER, BARRY & ROWE,
Oct.1.—1t. Mt. Hope Garden and Nurseries, Rochester, N. Y.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 copies for $10.

Payable always in advance.

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THE CULTIVATOR.

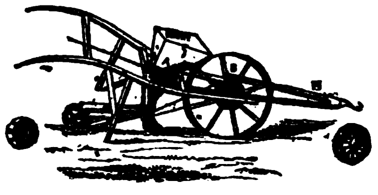
NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

Vol. V. ALBANY, NOVEMBER, 1848. No. 11.

IMPLEMENTS AT THE LATE STATE FAIR.

The exhibition of implements at the State Fair at Buffalo was, in respect to its extent and the general value of the articles, the best we have ever seen. There were many implements which appear likely to become useful, that have not hitherto been extensively known, and a brief notice of some which came under our observation, may be interesting.

Seed-sowers or Drills.—The introduction of these implements among the farmers of this country, is comparatively recent. In England, they have been known for many years, and their use has been constantly extending, till it is now considered a maxim there, that "the drill is the sheet-anchor of wheat husbandry." We see no reason why the system of drilling wheat or other grain, may not be attended with equal advantages here as in Europe—in fact, so far as it has been tried, we think its utility has been demonstrated. Drills of English and Scotch manufacture have been imported, and several have been made here by our own mechanics; and we understand that farmers who have tried both, are inclined to give the preference to those of "home manufacture," on account of their simplicity and cheapness, while they are equally as efficient and precise in their operations. Of those exhibited at Buffalo, we noticed Sherman's, of which a cut and description will be found in another place—and Pennock's, offered by the same person; Palmer's offered by Fitch, Barry & Co., Brockport, N. Y.; Graggs & Reynold's, offered by O. Reynolds, Webster, Monroe county, N Y. A drill, adapted to sowing all kinds of seeds, by hand or horse-power, was shown by H. L. Emery, Albany. Of this we have previously given a description. (See vol. for 1847, p. 121.)



Emery's Drill Barrow.

Horse Powers.—Horse-powers of various kinds are used for threshing grain, and for various other purposes. They are differently constructed according to the amount of force to be applied. Where only the strength of one or two horses is required, and especially where a portable power is wanted, some of these, *properly made*, on the "endless-chain" principle, have several advantages. Where it becomes necessary to apply several horses, a sweep or lever power is essential, in order to make the proper attachment. Of the former kind exhibited at Buffalo, we noticed Wheeler's, calculated for either one horse or two horses, offered by H. L. Emery, Albany. It has been described in our columns, and is well known. Of sweep powers, we noticed Hall's, offered by J. Hall, Rochester; Pitts', offered by J. A. Pitts, Rochester. These seem to be well constructed, and are, we understand, much used in Western New-York. We have heretofore given a description of Mr. Hall's, (see vol. for 1844, p. 344.) Taplin's power was offered by Eddy & Co., Union Village, Washington county, N. Y. This was described in our volume for 1844, p. 377.

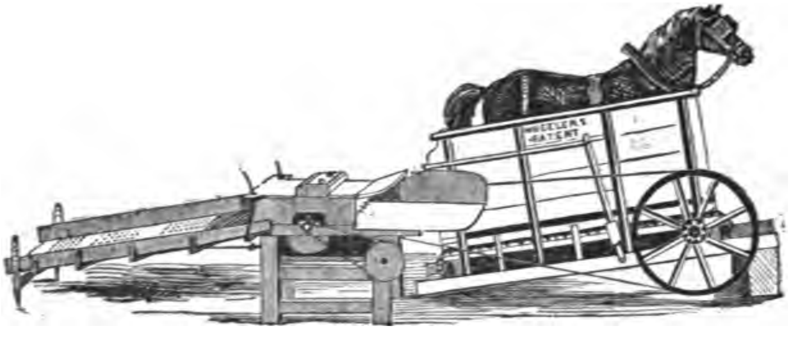
Cultivators.—In the construction and use of these implements, a great improvement has been made within a few years. The principal advantage to which we allude, consists in adapting them to the working of fallows. After a sod has been plowed, the cultivator is capable of penetrating the ground to a sufficient depth to eradicate weeds, and prepare the soil for wheat; and it is made of such dimensions that a much greater breadth can be worked in the same time, than could be done by the same team with a plow. For spring crops, also, land which is not too heavy, that had been broken up the previous fall, can be readily and cheaply brought into a good condition for planting by the use of a cultivator, of the right construction. Cast-iron, which has hitherto been frequently used for the teeth, is found to get too dull to cut the roots of weeds and stir the soil thoroughly. The teeth are now made of cast steel, of any size or shape desired, and being brought to a good edge at first, continue to keep so for some time.

Cultivators for working fallows are sometimes made with wheels, and are so contrived that by means of a lever or other apparatus, the frame work and teeth can be easily raised or lowered, so as to adjust the working of the implement to any required depth.

Of *large* cultivators at Buffalo, we noticed Ide's (of which a cut and description will be found in our vol. for 1847, p. 285;) Hinkston's offered by D. Hinkston, Clarkson, Monroe county, and one offered by E. R. Dix, of Vernon, Oneida county.

Of cultivators for hoed crops, we noticed several kinds. One by H. L. Emery, with cast-steel teeth, of good shape—expanding frame, with wheel in front—appeared likely to do good execution. There were other kinds which were not without merits, offered by E. J. Burrall, Geneva, and Wm. Adams, Middleport.

Plows.—There was a numerous display of these, though but few which differed essentially from those exhibited at previous exhibitions. H. L. Emery presented seven of different patterns, (including the "Worcester Eagle" plow,) a side-hill plow, and several



Wheeler's Horse Power and Threshing Machine.

subsoil plows. Different kinds were also presented by Starbuck & Son, Troy, Rapalje & Briggs Rochester, E. J. Burrall, Geneva; and H. Delano, Mottville. Eddy & Co., Union Village, Washington county, presented a plow with wrought-iron beam; J. H. Culp, Drummondville, Canada West, presented several kinds of the Scotch plow, for heavy soil, and also the "Improved Canada plow," for light soil.

Stave Machine.—An article under this head, which appeared to be very useful, was offered by Isaac Doolittle, of Rochester. It would make handsome staves from any kind of stuff, and at a very rapid rate.

Corn-shellers.—In a country where Indian corn constitutes the most important staple of production, the most ready and expeditious way of preparing it for market should be adopted. Machines for this purpose, worked both by hand and horse power are in use. Of the former, Clinton's, is well known, and operates well—being capable of shelling, with two hands, 100 bushels per day; it was offered at Buffalo, by H. L. Emery. A. H. Stevens, Geneva, presented a sheller calculated for shelling and cleaning the corn at the same operation. It appeared to operate well.

Of large machines, to be worked by horse or water-power, Smith's, described in the *Cultivator* for 1844, p. 381, is very expeditious in its operation.

Hay and Manure Forks.—The contrast between implements of this kind in use thirty years since, and the best made at the present day, is very great, and exhibits a striking improvement. It may be safely assumed that a man will accomplish a third more work in a given time, with one of our modern, light, spring-steel forks, than could have been done with the old clumsy articles used by our fathers. It is probable that the improvement in this article is attributable, in a greater degree to Henry Partridge, of Massachusetts, than to any other man.

Harvesting Machines.—The trials which have been made with various machines for cutting grain, have, we think, demonstrated the practicability of their success. They will, undoubtedly, be still further simplified and improved, and we confidently anticipate their being brought into extensive use on smooth lands, in the course of a few years. We are not prepared to decide which of the different kinds should have the preference. Hussey's, manufactured by O. Hussey, Baltimore, Md., has been more generally used than any with which we are acquainted, and we believe has worked very satisfactorily. McCormick's, seems also to have succeeded. Esterly's, described in the *Cultivator* for 1845, p. 25, is said to have lately undergone considerable improvement, and we have noticed very favorable recommendations of it in some of the western papers. We saw only Hussey's at the State show.

Mowing Machine.—The only article of this kind of which we have any knowledge, is that made by W. F. Ketchum, Buffalo. It was tried at the late show, and made very good work in second-crop clover. We are told by those who have tried it, that it performs well on a smooth surface, and where there is not fine thick grass at the bottom; but is liable to clog except in straight grass, like timothy, &c. The machine is simple and strong, and we hope will yet be made to answer the purpose effectually.

Fanning Mills—There has been a large competition in the manufacture of these articles for several years, and the consequence is, that several have been brought very near to perfection. Grant's, and Myers & Bryan's, were the only ones we saw at Buffalo.

Churns.—Yankee ingenuity has been made no less conspicuous in the great variety of *patent* churns it has produced, than in bee-hives and washing-machines. It must be admitted, however, that for doing a large business, some improvement on the old-fashioned dash churn has been effected. At Buffalo, we noticed Kendalls', and the "Thermometer churn,"—both offered by H. L. Emery, and the Atmospheric churn, offered by Peter Fraer, Lewiston. All these seem to be good implements for the purpose they are designed for.

Cheese-presses.—There are many cheese-presses of comparatively late introduction, and, as with other articles, there is a diversity of opinion in regard to their relative advantages. The "self-acting press," Collins & Stone's patent; Dix's "Anti-friction press, and a press offered by W. G. Brainerd, of Rome, were exhibited at Buffalo. The latter article, which operated by a lever and ratchet wheel, seemed to receive much commendation from those who examined it.

Straw and Corn-Stalk Cutters.—A distinction has latterly been made by several societies, in offering their premiums, between machines for cutting straw and those for cutting corn-stalks. Circular cutters, or those in which the knives are placed in the form of a cylinder, which is turned by a crank, and cutting by the edges of the knives being brought in contact with rollers made of hides, lead, paper, &c., are much more expeditious in their operation, and perform more work in proportion to the force applied than any other kind we have known; and for cutting straw and hay, we think they are generally preferred by persons acquainted with the different kinds. But for corn-stalks, which it is desirable to cut and *mash fine*, we should prefer a machine operating differently. Of the circular kind, Hovey's, Steven's, and Ruggles, Nourse & Mason's, were presented at Buffalo. Of other kinds, we noticed Catchpole's, and Richardson's.

Portable Mills.—There are many situations where these mills can be used advantageously. On large farms they may be worked by horse-power. We noticed Fitzgerald's, offered by C. Ross, (which has been before spoken of in our columns,) and one offered by E. T. Butler, Norfolk, Ct.

Sheep and cattle should be sheltered from storms during the month of November. Milch cows should be fed with a little hay on frosty mornings.

LITCHFIELD AGRICULTURAL SOCIETY.

The exhibition of this Society for the present year, at which we had the pleasure of being present, was held at Litchfield, Ct., on the 27th and 28th of Sept. In the aggregate, the exhibition afforded undoubted and gratifying evidence that a general improvement is progressing in the husbandry of the county. We believe this was the tenth anniversary of the society, and the display was considered equal to any former one. In one of the most important departments, working oxen and steers, the show was larger than on any former occasion. There were about one hundred yoke. Their general appearance was better than that of the cattle usually exhibited at the shows we have attended. They were mostly of medium size, nearly all of a red color—a great proportion of them mixed more or less with the Devon blood. The best working oxen are here, a very profitable description of stock, as they not unfrequently bring $150 per yoke.

The Devons were introduced to this county by **Lemuel Hurlbut**, Esq., in 1819, and seem destined to become here the leading stock. At present, the full bloods are in comparatively few hands; but the crosses of various grades are numerous. Few or none of the former have as yet been tried here for work. The only question in regard to their fitness for this purpose is, that they may not be quite large enough for the heaviest work, or to command the highest prices. We think this point requires some attention, and that the stock should be selected and bred with a view to obtaining the requisite size. Attention should also be given to their dairy qualities. If they are properly chosen in the first instance, and are carefully bred and reared, we are inclined to think, from what we have seen of the breed, that they will be found well suited to the climate and soil, and general purposes of this district.

Judging from the cattle exhibited at Litchfield, we should conclude that the important quality technically called *handling*, had not received much attention from the breeders. We regretted to find that the hides of a large proportion of the stock were rigid and unelastic, and instead of a soft *mossy* coat, were covered with straight, stiff hair, shining like bristles. The hard skins and hard quality of flesh to which we allude, have perhaps in some instances been the result of too much attention to a particular color, without due regard to the properties which constitute the real value of animals. The *touch* is the best indication of the thrift and quality of flesh, and at the same time it certainly does not lessen the capacity of the animal for labor or for the dairy. In examining the oxen exhibited on this occasion, it was found that the best for work, were almost invariably the best handlers, and we are confident that attention to this quality would result in increasing the general value of the stock.

The working oxen were tried with a stone-boat or drag, heavily loaded. This, though perhaps, a fair test of the muscular power of cattle accustomed to pull in this way, does not afford so good a criterion of their discipline, and aptitude for ordinary labor as a trial on a loaded cart or wagon, at a hill.

There were many oxen tried on this occasion, several of which exhibited surprising strength and ambition. Of those we had the opportunity of seeing, we noticed particularly the pairs owned by **Moses Lyman**, of Goshen, L. **Hurlbut** of Winchester, J. N. **Blakeslee** and **Philo Hard**, of Watertown. Mr. H.'s were smaller than the others, but of handsome form, quick and sprightly action, and when brought to the task, displayed a degree of intelligence, courage and power, that would have been creditable to the proudest courser. There were undoubtedly others deserving of notice, which we did not see tried.

Premiums were offered for the best *lots* of cattle, not less than ten in number, and there were several competitors under this head. Mr. **Hurlbut** of Winchester, showed twenty-nine head, twenty-six of which were full blood Devons, all except one or two bred by himself. He had twelve cows which would have compared favorably with any Devons we have ever seen at any show. His young stock were good, and several of them superior. His bull *Bloomfield*, five years old, weighing 1700 lbs. in only fair condition, is a capital animal—fine and blood-like in his points, and a nice handler.

Loren Thrall, of Torrington, showed thirty-six head, including three yoke of oxen. He had fourteen cows of various ages, some nearly full blood Devons, of good form, and many of them of good appearance for the dairy.

Mrs. **Vesta Hawkins**, of Watertown, showed sixteen head of cattle—ten of which were oxen and steers. The lot made a creditable appearance.

Mr. **Griswold**, of Torrington, showed a lot of very good cattle—the number we did not learn.

Of *milch cows*, we noticed two very superior ones belonging to the President of the Society, **Moses Lyman**, Esq., of Goshen. One of these we understood, was a full blood Short-horn, and the other a mixture of that breed. Few cows that we meet with anywhere, show better points for the dairy than these. Gen. F. **Buel**, of Litchfield, showed a "native" cow, remarkable for her yield of milk. He stated that her milk was weighed from the 21st of June to the 21st of August, and that it ranged from 33 to 44 pounds per day during that period—her feed, ordinary pasture. We noticed, also, two very fine looking cows, offered by **John G. Gillet**.

There were but few animals exhibited as *fat* cattle. We noticed a pair offered by R. I. **Canfield**, of New-Milford. They were bred in Monroe county, N. Y.; were four years old—weight 4,600 pounds. Their blood appears to be a mixture of Durham. Both are good, but one of them, for quality and ripeness, is seldom equalled by any of that age.

The show of horses was not large. The only stallions we noticed were *Timoleon*, owned by J. H. **Tuttle**, of Torringford—bred by Mr. **Satterthwait**, of Morristown, Belmont county, Ohio; and *Membrino*, owned by L. **Thrall**, of Torrington—bred by Mr. **Burton**, of Washington, Duchess county, N. Y. These were horses of good figure.

The sheep were less numerous than we expected from the number and high standing of the flocks of this county. There were some good Merinos offered by L. **Thrall**, and **Stephen** and **George Atwood**, of Watertown; and some fair Saxons by Mr. **Griswold**, of Torrington. N. B. **Smith**, of Woodbury, showed a few good South Downs.

The swine were few in number, but mostly of good appearance.

The plowing match, we must in candor say, was the least interesting part of the exhibition. The soil was light, inclining in some places to gravel, but mostly free from stones that would offer any hindrance to the plow; but with one or two exceptions the work was not done in a manner that would have satisfied a good farmer. The furrows were baulked, broken, in some places left flat, in others edgewise, and in others with the grass side up. This resulted from two causes; 1, the shortness and unsteady motion of most of the plows, and 2, from the work being done in a great hurry. It is worse than useless to plow faster than it can be well done; and we see no advantage in attempting any greater speed than could be kept up by the teams in a day's work. The object is to ascertain some actual improvement, not to excite astonishment at something which cannot be reduced to profitable practice.

The short plows here used, may answer a good purpose among rocks, and in rough and uneven ground; but are unfitted for such a soil as they put in on this occasion. Hence we see the necessity of adapting implements to their proper situations and purposes.

The exhibition of horticultural and dairy products, manufactured goods, &c., was respectable. The county has long been famous for the fine quality of its cheese, and its reputation did not suffer from the lots here exhibited. The competition in butter was considerable, and several of the parcels we examined were of a quality equal to any we have met with. The articles in this department being only designated by numbers, we had no means of learning the names of the exhibitors; but were informed that the cheese which was deemed the best, was offered by H. M. **HART**, of West Cornwall, and that the best lot of butter was offered by J. C. **AMBLER**, of Bethlem.

The annual address was delivered by Rev. Mr. **HARRISON**, of Bethlem. It was a judicious discourse, containing many useful ideas and wholesome remarks.

Notices of some of the farms of Litchfield county will be given in our next.

HYDROPHOBIA.

Of all the diseases to which the animal creation is liable, there is none, perhaps, so horrible in its manifestations as that called *rabies*—commonly known as hydrophobia. The latter term, however, seems to be in some degree inappropriate, inasmuch as a dread of water is by no means a universal accompaniment of the disease.

YOUATT, in his treatise on "*The Dog*," has given the pathology of rabies in a more detailed form than any other author; and as the disease is one of which there is always more or less danger, both to our domestic animals and to the human race, it may serve a good purpose to present a brief synopsis of his observations.

In answer to the question, what is the cause of rabies? Mr. Y. says—"It is the saliva of a rabid animal received into a wound or on an abraded surface." Of the nature of the virus he thinks we know but little. "It has not," he says, "been analyzed and it would be difficult to analyze it." It can only be propagated by inoculation—it must be brought in actual contact with the nervous fibre. He is of opinion that it never arises spontaneously, and he thinks if a quarantine of eight months could be established, and every dog confined separately for that length of time, the disease would be completely annihilated.

After the poison of a rabid animal has been communicated to another, it lies dormant for a while—The length of time varying with different animals. In the human subject the disease usually manifests itself in from three weeks to six or seven months; in the dog not less than fourteen days; and generally from five to six weeks—in three months from the time of being bitten, the dog would be considered safe. In man it usually runs its course in twenty-four hours—rarely exceeding seventy-two hours; in the horse it runs three or four days; in the sheep and ox five to seven days; in the dog four to six.

The disease has been communicated, either by the bite of a rabid animal, or by inoculation with the virus, to almost all kinds of animals; and in all it was accompanied by the same or similar characteristics. The strange and uncontrolable disposition to bite is generally manifested, even in rabbits, sheep, and in the human race. By way of experiment, two physicians inoculated fowls with the foam taken from the mouth of a rabid cow; and after about ten weeks, the birds died with evident symptoms of rabies.

MEANS OF PREVENTION.—Excision of the bitten or exposed part has been frequently resorted to, and with various success—the operation is thought to demand great skill, owing to the difficulty of taking out the affected part without bringing the virus in contact with the fresh-cut tissue. Cauterization, (burning the bitten part with a hot iron,) has been practiced with little advantage. The application of caustic—*lunar caustic*—has on the whole proved best. "It is," says Mr. **YOUATT**, "perfectly manageable, and being sharpened to a point, may be applied with certainty to every recess and sinuosity of the wound. If the whole of the wound has been exposed to its action, an insoluble compound of animal fibre and the metalic salt is produced, in which the virus is wrapped up, and from which it cannot be separated. In a short time the dead matter sloughs away, and the virus is thrown off with it." He recommends applying the caustic a second time, but more slightly after the eschar has sloughed off, in order to destroy any part that may not have been properly acted on by the first operation.

Mr. **YOUATT** states that he was several times bitten by rabid dogs; but that by a timely application of the lunar caustic, he escaped; "and yet often," says he, 'when I have been over-fatigued, or a little out of temper, some of the old sores have itched and throbbed, and actually become red and swollen." He was once bitten in a very dangerous manner by a rabid cat. This animal is generally very ferocious when laboring under rabies, though, fortunately it is but seldom that it is thus affected. During its paroxysms, its rage knows no bounds. In the case alluded to, the cat had been the playmate of the children of the family, but had, all at once, become sullen and ill-tempered. It got into an upper room were it was allowed to remain, and Mr. **YOUATT** was sent for. He gives the following thrilling account of the scene which ensued:

"It was nearly dark when I went. I saw the horrible glare of her eyes, but I could not see so much of her as I wished, and I said I would call again in the morning. I found the patient, on the following day, precisely in the same situation and the same attitude, crouched up in a corner and ready to spring. I was very much interested in the case; and as I wanted to study the countenance of this demon, for she looked like one, I was foolishly, inexcusably imprudent. I went on my hands and knees, and brought my face nearly on a level with hers, and gazed on those glaring eyes and that horrible countenance, until I seemed to feel the deathly influence of a spell stealing over me. I was not afraid, but every mental and bodily power seemed in a manner suspended. My countenance, perhaps alarmed her, for she sprang on me, fastened herself on my face, and bit through both my lips. She then darted down stairs, and I believe was never seen again. I always have nitrate of silver in my pocket; even now I am never without it. I washed myself, and applied the caustic with some severity to the wound; and my medical adviser and valued friend furnished still more after I got home. My object was attained, although at somewhat too much cost, for the expression of that brute's countenance will never be forgotten."

Mr. Youatt very severely censures the practice indulged in by many persons, of allowing dogs to lick their hands and face. He says the habit is a very dangerous one, and relates a case of a lady having lost her life by suffering her dog to lick a pimple on her chin. Horses have also taken the disease from dogs licking their muzzles, which were scratched or chafed.

The following extracts from Mr. Youatt's description of the symptoms of rabies, may prove useful in preventing the consequences of this dreadful malady.

"The early symptoms of rabies in the dog, are occasionally very obscure. In the greater number of cases these are sullenness, fidgetiness, and continual shifting of posture. Where I have had opportunity, I have generally found these circumstances in regular succession. For several consecutive hours, perhaps, he retreats to his basket or his bed. He shows no disposition to bite, and he answers the call upon him laggardly. He is curled up, and his face is buried between his paws and his breast. At length he begins to be fidgety. He searches out new resting-places; but he very soon changes them for others. He takes again to his own bed; but he is continually shifting his posture. He begins to gaze strangely about him as he lies on his bed. His countenance is clouded and suspicious. He comes to one and another of the family, and he fixes on them a steadfast gaze, as if he would read their very thoughts. 'I feel strangely ill,' he seems to say: 'have you anything to do with it? or you? or you?'" Has not a dog mind enough for this? If we have observed a rabid dog at the commencement of the disease, we have seen this to the very life.

"A peculiar delirium is an early symptom, and one that will never deceive. A young man was bitten by one of his dogs; I was requested to meet a medical gentleman on the subject. I was a little behind my time; as I entered the room, I found the dog eagerly devouring a pan of sopped bread. 'There is no madness here,' said the gentleman. He had scarcely spoken when the dog quitted the sop, and with a furious bark sprung against the wall as if he would seize some imaginary object that he fancied was there. 'Did you see that?' was my reply. 'What do you think of it?' 'I see nothing in it,' was his retort; 'the dog heard some noise on the other side of the wall.' At my serious urging, however, he consented to excise the part. I procured a poor worthless cur and got him bitten by this dog, and carried the disease from this dog to a third victim: they all became rabid one after another, and there my experiment ended. The serious matter under consideration, perhaps, justified me, in doing as I did.

"This kind of delirium is of frequent occurrence in the human patient. The account given by Dr. Bardsley of one of his patients, is very appropriate to our present purpose:—'I observed that he frequently fixed his eyes with horror and affright on some ideal object, and then with a sudden and violent emotion, buried his head beneath the bed-clothes. The next time I saw him repeat this action, I was induced to inquire into the cause of his terror. He asked whether I had not heard howlings and scratchings. On being answered in the negative, he suddenly threw himself on his knees, extending his arms in a defensive posture, and forcibly threw back his head and body; the muscles of the face were agitated by various spasmodic contractions; his eye-balls glared, and seemed ready to start from their sockets; and at that moment, when crying out in an agonizing tone, 'Do you see that black dog?' his countenance and attitude exhibited the most dreadful picture of complicated horror, distress and rage, that words can describe or imagination paint.'

"There is also in the human being, a peculiarity in this delirium which seems to distinguish it from every other kind of mental aberration. 'The patient,' in Mr. Lawrence's language, 'is pursued by a thousand phantoms that intrude themselves upon his mind; he holds conversation with imaginary persons; he fancies himself surrounded with difficulties, and in the greatest distress. These thoughts seem to pass through his mind with wonderful rapidity, and to keep him in a state of the greatest distress unless he is quickly spoken to, or addressed by his name, and then in a moment the charm is broken; every phantom of imagination disappears, and at once he begins to talk as calmly and connectedly as in perfect health.'

"So it is with the dog, whether he is watching the motes that are floating in the air, or the insects that are annoying him on the walls, or the foes that he fancies are threatening him on every side—one word recalls him in a moment. Dispersed by the magic influence of his master's voice, every object of terror disappears, and he crawls towards him with the same peculiar expressions of attachment that used to characterize him. Then comes a moment's pause—a moment of actual vacuity—the eye slowly closes, the head droops, and he seems as if his fore feet were giving way and he would fall: but he springs up again; every object of terror once more surrounds him—he gazes wildly around—he snaps—he barks, and he rushes to the extent of his chain, prepared to meet his imaginary foe.

"The expression of the countenance of the dog undergoes a considerable change, principally depending on the previous disposition of the animal. If he was naturally of an affectionate disposition, there will be an anxious, inquiring countenance, eloquent beyond the power of resisting its influence. It is made up of strange suppositions as to the nature of the depressions of mind under which he labors, mingled with some passing doubts, and they are but passing, as to the concern which the master has in the affair; but most of all, there is an affectionate and confiding appeal for relief. At the same time we observe some strange fancy, evidently passing through his mind, unalloyed, however, by the slightest portion of ferocity.

"In the countenance of the naturally savage brute, or him that has been trained to be savage, there is, indeed a fearful change; sometimes the conjunctiva is highly injected; at other times it is scarcely affected, but the eyes have an unusually bright and dazzling appearance. They are like two balls of fire, and there is a peculiar transparency of the hyaloid membrane, or injection of that of the retina.

"A very early symptom of rabies in the dog, is an extreme degree of restlessness. Frequently he is wandering about, shifting from corner to corner, or continually rising up and lying down, changing his posture in every possible way, disposing of his bed with his paws, shaking it with his mouth, bringing it to a heap, on which he carefully lays his chest or rather the pit of his stomach, and then rising up and bundling every portion of it out of the kennel. If he is put into a closed basket, he will not be still for an instant, but turn round and round without ceasing. If he is at liberty, he will seem to imagine that something is lost, and he will eagerly search round the room, and particularly every corner of it, with strange violence and indecision.

SUBSOIL PLOWING.

Plowing is one of the most important branches of agriculture—necessary even to its existence. The improvement of practical agriculture, is in proportion to the improvement made in the art of plowing. The principles which chemistry has revealed may be made abortive—their results defective—by improper plowing.

The object to be obtained by plowing, is three fold: 1st, to pulverize the soil; 2d, to expose a great depth of soil to the action of the atmosphere; 3d, to hold the many fertilizing substances brought down by rain and snow, and absorbed by the soil.

It becomes necessary to pulverize the soil, so that the roots of plants may extend in all directions, freely and to a great distance. The atmosphere coming in contact with deep and well pulverized earth, imparts heat and moisture, and, acting upon the soil, assists in liberating its salts and in bringing it into that condition which is best fitted for the growth of crops.

A small proportion of water during rains more or less heavy, sinks into the soil when shallow plowed; such soil is sooner affected by the drouth, and is dry at a greater depth than deep earths, as may be shown by an examination of shallow and deep plowing in a time of drouth. Common plowing does not reach sufficiently deep, to accomplish all that is desired; but deep plowing and its good results are effected by following the common plow with the subsoil plow. It simply loosens the subsoil, and leaves it in that state that roots can enter it, that air can permeate it, and water be absorbed by it. A subsequent plowing, with the common plow, can then easily intermix the surface and subsoil. Plowing may thus be effected sixteen to twenty inches deep.

I have found from frequent examinations of the roots of corn, wheat and oats, during the last four or five years, that they are generally inclined to grow downwards, some of the roots even straight down until they reach the subsoil, then after penetrating an eighth or a fourth of an inch, turn horizontally. I traced a root of a wheat plant which had extended sixteen inches nearly perpendicular, in less than three months after it had been sowed, on ground previously subsoiled. It is interesting to take the spade and examine the roots of crops, at any stage of their growth, in order to compare the effects of common or shallow, with those of subsoil plowing. To see the roots of corn pushing boldly downwards eighteen inches in search of food, eight inches of which has never been penetrated except by the noble oak and hickory, and occasionally by the searching taproot of clover, as I have witnessed this past summer, affords pleasure as well as instruction to the farmer, who takes pride in fat swine or stall-fed oxen.

I subsoiled three-fourths of an acre through the middle of an eight acre lot, in June, 1846, for wheat. The field was plowed but once, and cultivated several times previous to sowing the wheat. I am not able to give the result accurately, in consequence of cutting the grain with a reaper, by which I was unable to keep the wheat separate. The difference was quite perceptible at the time of harvesting; it stood thicker on the ground, and the berry was of a better quality than the adjoining on ground not subsoiled.

In May last, I subsoiled one and a-half acres for corn, in a field containing six acres. It had been a timothy meadow for four years. The soil was clay loam, subsoil a tenacious clay; a part of the subsoiled ground was a swale previously ditched, a part was a ridge, the balance a wet swale, with a compact, impervious subsoil. Twenty loads of unfermented manure was applied to the acre. It was plowed in May five inches deep, and subsoiled nine inches more.

I saw no difference in the corn until August, which was then very perceptible during the drouth of that month. The corn upon the subsoiled part retained all its beautiful freshness, bearing a healthy perpendicular tassel, and having the appearance through the day of having been refreshed with a shower of rain the previous evening. That on the unsubsoiled parts, yielded to the drouth, the tassels drooped and the leaves became dry and rolled. After an examination of the soil and subsoil about this time with the spade, the difference in the parts became no longer a mystery.

The earth was moist on the subsoiled portion, within a fourth of an inch of the surface; on the unsubsoiled, it was dry to the depth of an inch, the balance below dryer than the former. In the one, the subsoil was filled with corn roots in search of food and water; in the other, they were turned aside by the subsoil. The corn on the wet swale was as good, if not better, than any other portion of the field. Judging from the present crop, I am of opinion, that subsoiling this wet swale was an advantage to the crop of one hundred per cent, notwithstanding the objection raised by some, to subsoiling wet land without ditching.

In consequence of an experiment by which I wished to test two varieties of corn, which crossed the field in an opposite direction to that of subsoiling, I only compared three rows of shocks, five rows in each shock, each row of shocks gathered from twenty-one rods of ground. The result was as follows:

No 1. not subsoiled, gave.......... 606 lbs. of ears.
2. 3 rows subsoiled, 2 rows not, 646 " "
3. subsoiled,.................. 676 " "

The subsoiled gave at the rate of 73 bushels to the acre; that not subsoiled, 65 bushels per acre; a difference sufficient to pay for subsoiling. I considered the subsoiled part as having been previously inferior for corn. I aimed to be accurate; if there was any difference in the previous condition of the soil, or in estimating the results of the experiment, it was in favor of the unsubsoiled portion. From the observation of the effects of subsoiling, so far as it has been practiced by myself and others, my mind has become settled in the conviction, that subsoil plowing upon most, if not all of the land of this county, will prove very beneficial for corn and all crops usually raised by us.

I may be mistaken, but I fully believe, that subsoiling thoroughly performed, will prove more profitable to farmers for the outlay, than any other one improvement. I have never anticipated much improvement from it, until after one crop of clover. Then I expect a complete preparation of the soil for wheat. It is unnecessary for me to describe, with what ease a clover root will penetrate the loosened subsoil, and even go further in search of food, gaining strength with every additional inch of depth, bringing the salts of the lower strata to the surface for its use, and affording by its decay, when turned under by the plow, rich stores of food for wheat. In conclusion, I would recommend subsoiling in the spring and fall, or when the ground is wet sufficiently deep, at any time in the summer. It does well for a summer fallow, if broken up early. It is beneficial to any crop. The expense is about the same as for breaking up sod ground. And finally, if this short and imperfect essay shall persuade one farmer of this county to practice deep tillage with subsoiling, the object of the writer will be attained. John Mallory.—*N. Y. State Ag. Society's Trans.*

PHEASANT BREEDS OF FOWLS.

We are aware that some are inclined to doubt whether any of our domestic fowls possess the blood of the true pheasant. It is assumed, as the ground for this doubt, that animals produced by an union of different species, must be barren. It is true that many animals thus produced have not the power of procreation; but we think the conclusion that sterility is the *invariable* result of a mixture of species, is at variance with facts. We know that conflicting opinions have been expressed on this subject, and we shall not at this time attempt an elaborate investigation of it; but will only refer to some testimony and mention some facts having a direct bearing on the question of the union of the blood of the pheasant with the domestic fowl.

Mowbray, and most of the older writers, though they admit the practicability of crossing the two species alluded to, contend that the progeny would be as unproductive as that produced by the horse and ass, or the Canadian and common goose. We have formerly held this opinion ourselves, but have been forced to relinquish it on further evidence and observation.

Another idea entertained in relation to this matter is that hybrids between different species are incapable of breeding among themselves, but may produce a fertile offspring when coupled with either of the parent stocks. This theory is held by the writer of a series of very interesting articles on poultry, with the signature, "D. S. E.," in the English *Agricultural Gazette*. He says, "A cock pheasant with a domestic hen will produce hybrids (or mules) which cannot generate among themselves; but any one of these crossed with one of a different family of pure breed, will often produce a new sort, from which may spring a new improved variety."

We admit it to be a general characteristic of hybrids that they are inclined to sterility, and we think this tendency is more readily overcome when they are bred in the way above indicated; at the same time we do not see that it is by any means impossible that hybrids should sometimes breed among themselves. If we have been correctly informed, such has in several instances been the case with the offspring of the pheasant and some varieties of the domestic fowl. According to the best information to be obtained, the origin of the pheasant or golden top-knot fowl, was a cross of the pheasant and the Hamburgh or spangled top-knot. We have heard of several cases where the stock has been continued among the hybrid progeny; and more than one person has declared that the same has been done with a cross of the pheasant and game fowl.

A writer in the paper before mentioned, noticing the remarks of D. S. E., (from which we have quoted,) says—"pheasants from the woods often breed with common poultry, and produce a beautiful race, which carried forward with the pheasant blood, become smaller indeed, but elegant and graceful. I have just now, a most beautiful creature of this breed. She is the daughter of a cock pheasant and a hen, the produce of a pheasant and a game hen, consequently has three-fourths of the pheasant blood, and one-fourth of game hen. She is spangled all over with bright gold, brown and black feathers; while down her back a few white drops like snow flakes, give her, to my eye, an appearance of high blood, like a white 'ticked' greyhound; her shape is round, plump and elegant, her motions especially graceful." He further describes the cross-bred stock and says—"The cocks are often like a stout red game bird, many with black and gold semi-circular spangles over the breast. One thing ought particularly to be remarked; the comb universally, I think, in these mules (or hybrids,) is, in the hen short; flat and low." The hens of the stock that are three-fourths pheasants are described as being "very like a hen pheasant; the tails, however, always erect;" and in some of the half-breds, the tails of the cocks, instead of being at all horizontal, were "carried quite back like a squirrel's,' so that the head and tail meet at times.

The same writer further observes that he is by no means convinced of the impossibility of carrying forward the breed by the direct cross. From the rarity of the attempts, and from the birds being usually reared in pens, robust fowls, and those totally unconnected in blood, (absolutely requisite) are seldom paired. The only plan to give the breed a fair trial, would be to take a strong, robust cock and hen, the mothers of which should be hardy, well acclimated hens, of quite distinct races—say the Malay, the Dorking, the Spanish, the Polish (spangled) or the game breed, and then cross them under favorable circumstances." He observes, what has been remarked by others, that all the crosses of the pheasant lay well.

The above description of pheasant fowls, corresponds, generally, with the appearance of those bred by Mr. T. C. ABRAHAMS, of West Troy, of which we have spoken on a former occasion. He says that he has bred them of various degrees of pheasant blood, from one-fourth to half, and three-fourths. In some of the three-fourths pheasant hens that he has shown us, the resemblance to the full blood pheasant hen was quite striking. Some of them were entirely destitute of comb and gills, and the head had the round form, the eye the size, fullness and brilliancy characteristic of the pheasant. They had, also, much of the pheasant form and motion, and in some instances there was a similarity of plumage. In this last particular, however, they did not so generally exhibit the traits of the pheasant as might have been expected. Some of the cocks also presented strong marks of the pheasant; though, as remarked in regard to the hens, less in color and arrangement of the plumage than in their other characters. They had the broad full breast, almost naked head, with but little comb or gills, clear eye and quick motion, with a restless habit, and a disposition to take wing on the least excitement; and when engaged in combat, were disposed to rise above their antagonist and strike down upon him.

The infusion of pheasant blood tends to improve the texture and flavor of the flesh of the domestic fowl—especially the coarser varieties of the latter. The author of "*Farming for Ladies*," observes in regard to these cross-bred fowls—"Their flesh has so much of the game flavor, coupled with the juice of the fowl, as to be greatly admired by connoisseurs in good eating."

We presume that crosses of the pheasant might be readily obtained with any variety of domestic hens, by rearing the male pheasants with the females of the former—keeping them together from the time they are hatched.

SHOW OF ANIMALS BY THE NEW YORK STATE AGRICULTURAL SOCIETY, AND BY THE HIGHLAND SOCIETY OF SCOTLAND.—The number of cattle at the late show at Buffalo, was 360—of horses 150—sheep 597—swine 50—poultry 250. At the late show of the Highland Society at Edinburgh, the number of cattle was 352—horses 141—sheep 764—swine 58—poultry 130. There were 92 exhibitors of implements.

EXHIBITIONS OF COUNTY AGRICULTURAL SOCIETIES.

Oneida County, N. Y.—The exhibition took place at Clinton, on the 27th and 28th of Sept., and is spoken of as superior to any former one. The number of people in attendance is rated from 8,000 to 10,000. Every department was filled—the competition being unusually extensive. The county of Oneida is becoming distinguished for its enterprise and improvements, not only in agriculture, but in horticulture, manufactories, and in all objects which tend to develope the internal resources and wealth of the county.

Worcester County, Mass.—The meeting of this Society, held on the 27th September, is called by the *Plowman*, " a glorious meeting," embracing "greater numbers than ever assembled there before on a like occasion." The cattle were numerous, and "all looked well." The horticultural department, as usual, full and excellent. Ex-Governor Lincoln gave an interesting statement in regard to the origin and progress of the society. It is now thirty years since its commencement. " He said a few patriotic gentlemen of Worcester, six or seven in number, held a meeting, and immediately subscribed the sum of three thousand dollars. This sum entitled the society to receive from the State the highest sum granted; that is, six hundred dollars per annum. This three thousand was subscribed with the understanding that as the stock of the company, at five dollars for each subscription, should be paid in, the money should be applied to the cancelling of the notes given for the three thousand dollars ; and he stated that within one year subscribers enough were found to pay up the whole. So much for the agricultural spirit and liberality of the farmers of Worcester county."

Essex County, Mass.—This old society held its show for this year at Lynn, on the 28th September. The number of people in attendance was said to have been greater than at any former show. " A vast concourse of people," (says the *Plowman*,) " honored the festival here. It has become a holiday for all classes of people, from the laborer by the day to the laborer by the season—from the manufacturer of shoes to the maker of laws." Several distinguished gentlemen, legislators and others, were present, among whom was Mr. Webster, who made a stirring speech on the general subject of agriculture and its associated arts. The show is represented to have been excellent in every department. There were 29 competitors at the plowing match, and the work was done " in the best style, nothing could excel it."

Middlesex County, Mass.—Show at Concord, on the 4th of October. Owing to unfavorable weather the attendance was less than usual. There were 27 competitors at the plowing match, and the fields, containing an eighth of an acre each, were plowed in 30 minutes, and the work is said to have been done in a perfect manner.

Jefferson County, N. Y.—Show at Watertown, September 28. The exhibitition was in all respects good—the competition in most departments large and spirited—and the prospects of the society flattering.

Onondaga County, N. Y.—Show and Fair at Syracuse, Oct. 4th and 5th. The weather was rather unfavorable, but notwithstanding this, the attendance is said to have been larger than ever before, and the show generally (says the *Standard*) gave evidence of a growing interest in agriculture.

Monroe County, N. Y.—Show and Fair at Rochester, October 4th and 5th. The *American* says " the exhibition generally was superior to any preceding for several years. There was a large show of stock, implements, fruits, vegetables, &c."

Berkshire County, Mass.—Show and Fair at Pittsfield, October 4th and 5th. The unfavorable weather on the day preceding the show, somewhat prevented the arrival of stock from a distance, but yet the display is said to have been but little inferior in numbers or quality to any previous year, and the show of manufactures was equal to that of any former occasion. The address, by Prof. Norton, was received with great satisfaction.

Housatonic, Mass.—This society is organised within the limits of Berkshire county, and has for several years held its exhibition at Great Barrington. It is a spirited association, and has done much good in the region of its location. Its show this year was on the 27th of September, and from the reports of the several committees, we presume it was fully equal to those which have preceded it.

Chittenden County, Vt.—Show at Burlington, September 27th. The display in general, though hardly equal to that of last year is spoken of as "highly creditable to all parties."

Dutchess County, N. Y.—Annual Show and Fair held in the town of Washington, October 5th. The unfavorable weather for several days previous, tended to keep many people at home; but the show was, notwithstanding, a good one. The *Journal and Eagle* says it was the " best, with the exception of implements and plowers, ever held in the county. The display of stock was splendid, horses especially, and so large was the number of fine sheep that an extra committee was found necessary to examine into their merits. In agricultural productions, fruits, and domestic manufactures, there were fine collections, and a vast concourse of people, including a great many ladies, attended."

Windham County, Vt.—Show and Fair at Fayetteville, first week in October. Owing to a severe storm on the day preceding, the exhibition did not come up to that of last year. But the animals and articles were creditable, and there was much to interest the farmer.

Rutland County, Vt.—Fair at Rutland, September 27th and 28th. From the account given by the Secretary, in the Rutland *Herald*, we infer that the exhibition was equal to those of former years. The list of premiums paid, make a creditable appearance.

Columbia County, N. Y.—Show and Fair at Hudson, October 11th. The attendance was unusually large, more so than at any previous fair. The display, though good, was hardly equal to that of last year. The horses were much better than on any previous occasion. The show of fancy articles was not so good as usual.

Hartford County, Ct.—Exhibition at Hartford, October 11th and 12th. The in-door department is said to have been less crowded this year than in some former years. Though there was an inferiority in some articles, the superiority of others was evident. The display of fruit, especially pears, is spoken of as indicating increased attention to this branch.

Hampshire and Franklin Counties, Mass.—Exhibition at Northampton, October 11th and 12th. The assemblage of people was unusually large, and the show, with the exception of cattle, was good.

MANAGEMENT OF SHEEP IN HUNGARY.

In 1845, Mr. CHAS. S. FLEISCHMANN, formerly an officer in the United States Patent Office, visited various countries of Europe, and made examinations of the agriculture, and other branches of industry. He particularly noticed the mode of breeding and managing fine wooled sheep as practiced in the best districts of Germany, Austria, Hungary, &c. The result of his inquiries and observations is given in the Report of the Commissioner of Patents for 1847. The article embraces much information which cannot fail to be valuable to farmers and wool-growers in this country. The production of fine wool has probably been carried on with greater success in the countries alluded to, than in any other part of the world, and a knowledge of the system there pursued, may enable us to imitate them advantageously. The following is Mr. F.'s account of the mode of feeding and breeding sheep at the estate of Alcsuth, in Hungary:

Successful breeding of sheep is in a great measure dependent upon a sufficient supply of food of the first quality, its proper preservation, economical use, and its augmentation on scientific principles. Of comparatively much greater moment, however, is the system followed in feeding them, and it is thought therefore interesting to give an account of the system as adopted at Alcsuth.

JANUARY.—Breeding bucks, receive in the morning one pound of esparsette (sanfoin) each; at 9 o'clock, watering; at 10 in the morning half a pound of hay of second quality; at 1 o'clock, P. M. ditto.; at 3, watering; and in the evening one pound of mixed hay.

Bucks for sale receive in the morning one pound mixed hay; at 9 o'clock, watering; at 10 esparsette half pound; at 1 P. M. do.; at 3, watering; in the evening 6 sheaves of oats, half threshed, and twenty-six pounds of hay, to 100 rams.

Sucking ewes receive in the morning one pound of esparsette; at 9, watering; at 10 o'clock, to 100 ewes, one metzen[*] of potatoes in small pieces; and thereafter straw at one P. M.; each ewe half a metzen of chaff mixed with oats and salt (say three-quarters of a metzen of oats and five ounces of salt to 100 ewes;) at 3 watering; at half past three, to 100 ewes, one metzen of potatoes cut to pieces; and in the evening, to 100 ewes, five sheaves of oats half threshed; and thirty pounds of winter straw for picking. Ewes of weak constitution, as well as those having twins, receive in addition, twice a day, a pint of barley meal each.

Barren ewes and such as are two years old, receive in the morning half a pound of chaff (mingled with three-eighths of a metzen of oats and four ounces of salt to 100 ewes,) at 9 o'clock watering; at 10, to 100 ewes, one metzen of potatoes, thereafter straw; at 12 M., three-quarters of a pound esparsette; at 3 P. M. watering; and in the evening, to 100 ewes, three sheaves of oats half threshed, and fifty pounds of winter straw for picking.

Ewes and wethers two and a half years old, receive in the morning three-quarters of a pound of chaff (mixed with two-eighths of a metzen of oats and four ounces of salt to 100 head,) at 9 o'clock watering; at 10 o'clock to 100 head three-quarters of a metzen of potatoes, and thereafter one quarter of a pound of barley straw each; at 12 M., three-quarters of a pound of esparsette; at 3 P. M., watering; and in the evening to 100 head, 3 sheaves of oats.

Old wethers receive three-quarters of a pound of carrots; at 9 o'clock watering; at 10 o'clock to 100 head, one and a half metzen of potatoes, and thereafter straw; at 12 M., three-quarters of a pound of hay, second quality; at 3 watering; and in the evening to 100 head four sheaves of oats.

Old wethers and barren ewes receive in the morning three-quarters of a pound of steamed chaff; at 9 o'cl'k watering; at 10 o'clock, to 100 head, one and a half metzen of potatoes, thereafter straw in the yard; at 1 o'clock three-quarters of a pound of esparsette; at 3 watering; and in the evening again three-quarters of a pound of steamed chaff.

Wethers two years old, receive in the morning half a pound of chaff, with three-eights metzen of oats and four ounces of salt to 100 head; at 9 watering; at 10 o'clock, to 100 head, one metzen of potatoes, and thereafter straw; at 1 o'clock, three-quarters of a pound of esparsette or hay of second quality; at 3 watering, and in the evening three sheaves of oats to 100 head.

FEBRUARY.—Rams for coupling, receive in the morning one pound of oats and vetches mingled; at 10 o'clock half pound of hay second quality; at 1 P. M., half pound of esparsette; at 3 o'clock, watering; and in the evening, six sheaves of oats, half threshed, and twenty pounds of winter straw for picking, to 100 head.

Rams for sale, of the first class, receive in the morning one pound of esparsette; at 9 o'clock watering; at 10 o'clock of hay of second quality half a pound; at 1 P. M., ditto; at 4, watering; and in the evening to 100 head, six sheaves of oats together with twenty pounds of winter straw.

Rams for sale, of the second class, receive in the morning one pound of oats and vetches mingled together; at 9, watering; at 10 o'clock of esparsette half a pound; at 1 P. M., ditto; at 3 watering, and in the evening, to 100 head, five sheaves of oats half threshed, together with twenty pounds of winter straw.

Sucking ewes of the first class, receive in the morning one pound of esparsette; at 8 o'clock watering; at 9 o'clock, to 100 head, 1 metzen of potatoes cut to pieces, thereafter straw; at 12 M., half pound of chaff with three-eighths metzen of oats and five ounces of salt; at 1 o'clock, watering; at 4 P. M., to 100 head, 1 metzen of potatoes, and in the evening five sheaves of oats, together with thirty pounds of winter straw.

Sucking ewes of second class, are treated on precisely the same footing, there being only this, not very material distinction made with regard to them, viz. that they receive their chaff together with oats and salt, not until 1 (instead of 12) o'clock.

Barren ewes and those two years old. They are fed precisely as in January, with only this difference that they get their esparsette, at 1 o'clock in the afternoon, instead of 12 o'clock.

Old wethers have, in this month, their early watering at 8 o'clock, their potatoes at 9, and their food in the afternoon at 1 o'clock.

Two year old wethers. The hour of watering is fixed at 8 in the morning, that of potato-food at 9, and that of hay-fodder at 12 o'clock; in every other respect the order of January is observed.

Two years and a half old wethers and ewes. The order of food remains as in January, except that in the morning the watering is at 8, and the potato feeding at 9 o'clock in the morning. The straw given after the potatoes during this month is offered in the yard.

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[*] A metzen is equal to one and three quarters of a bushel English.

MARCH.—Rams for coupling. Only the hour of watering is changed from 3 to 4 o'clock, P. M.

Rams for sale. Those of the first class have the watering in the afternoon at 3 o'clock, and those of the second have it in morning at 8, and in the afternoon at 4 o'clock. In every other respect the order of February is retained.

Sucking ewes of the first class, get in the morning one pound of esparsette, while in every other respect the old order is retained.

Sucking ewes of the second class, get in the morning three-quarters of a pound of hay, second quality; watering at 8; at 9, one metzen of potatoes to 100 head; thereafter straw in the yard; at 10 o'clock, half pound of chaff mixed with three-eighths of a measure of oats, and five ounces of salt to 100 head; at 3 P. M., watering; at 4 o'clock, to 100 head, one measure of potatoes, and in the evening five sheaves of oats.

Barren ewes and such as are two years old, are treated on the same footing as before, except that the watering is to be at 8 o'clock in the morning, and the potato feed at 9.

Old wethers receive in the morning five quarters of a pound of after-math, (rowen;) at 9 o'clock, watering; at 10 o'clock, potatoes, one and a half metzen to 100 head, and thereafter, straw in the yard; at 1 P. M. three-quarters of a pound of esparsette; at 4 o'clock, watering; in the evening four sheaves of oats to 100 head, and those that are weak get a pound of carrots instead of oat-straw.

Wethers two years old are fed precisely as in February.

Ewes two years old receive the esparsette at 1 o'clk, and their hour of watering is 4 o'clock; otherwise the old order remains.

Lambs receive in the morning half a pound of hay, first quality; at 9 o'clock, watering in the stall; at half past 10 o'clock, to 100 head, five metzen of oats; at 10 o'clock, lucerne half pound; at 1 o'clock, P. M. the same; at 3 P. M., watering; at half past 4, again three metzen of oats to 100 head, and in the evening half a pound of oats and vetches mingled.

APRIL.—Rams for coupling receive in the morning one pound of esparsette, have drink at 8 o'clock, then straw; again, at 11 o'clodk, half a pound of hay, first quality; at 3 o'clock the same; at 4, drink; at 6 o'clock five sheaves of oats half threshed and twenty pounds summer-straw to pick to 100 head.

Rams for sale, on the whole are treated alike, yet in the evening at half past 5 o'clock six sheaves of oats are given to 100 head.

Old ewes, every morning receive half pound of chaff, with three-eighths metzen of oats and five ounces of salt to 100 head; at 8, drink; at 9 to 100 head, one metzen of potatoes, and after, straw in the yard, at 12 o'clock, three-quarters of a pound of hay, second quality; at 3, drink, then again straw in the yard, and last, at half past 6 o'clock three sheaves of oats.

Old wethers receive in the morning three-quarters of a metzen of steamed chaff at 8 o'clock; at 9 o'clock, half a metzen of potatoes to 100 head, and then straw in the yard; at 10 o'clock, three-quarters of a pound of esparsette; at half past 4, drink, and after, again straw in the yard: at six in the evening, half a pound of steamed chaff.

Lambs get in the morning half a pound of hay of first quality, at 8, drink in the stall; at 9 o'clock, to 100 head, six half metzen of oats; at 11 o'clock, each, half a pound of lucerne; at 12 o'clock, one pound of the same; at 4, drink at the well; at half past 4, again six half metzen of oats to 100 head; and at half past 5 o'clock, half a pound of oats and vetches mixed.

In the month of MAY, feeding in the stall is given up, and pasture commenced. At first, and until the sheep have become perfectly used to the rich green food, they receive, before being driven to pasture, dry winter fodder and drink. The sheep are not driven out until the thaw has dried up, and the shepherd's servant has to drive them to that part of the pasture which is especially assigned, so that the artificial meadows may be spared for a longer time, and, on the other hand, the sheep may continually find sufficient pasture to feed on. Moreover, the nearest pastures belong to the ewes, and the remotest are for the wethers; the lambs remain in the vicinity of the farm, and during the hot hours of noon the sheep are to be in the stall, in case the distance does not exceed one mile. On these pastures which are far distant, there are shelters for the protection and convenience of the animals. The flocks are most carefully protected against rain. In rainy or rough weather the sheep must be fed in the stall, where they remain; in addition to the dry-fodder cut to chaff, some green lucerne is given which, as we take occasion to add, is stored up in airy and cool fodder rooms, and is well spread on boards, in order not to get heated.

And *vice versa*, according as the autumn, and therewith the winter feeding approaches, the portion of dry fodder which the sheep receive before being driven out, is increased from day to day, in order that the animal organism may again become disused to rich food.

In NOVEMBER, feeding in the stall is resumed, and,

Rams for coupling receive in the morning one pound of oats and vetches mingled; at 9 o'clock, watering, then straw in the yard; at 11 esparsette, half a pound; at 1 o'clock, half a pound of hay, second quality; at 3 drink; at 4 P. M. six sheaves of oats and twenty-five pounds of winter straw to 100 head, for picking and strewing.

Rams for sale receive in the morning one pound of esparsette; at 9 o'clock, drink; at 10 o'clock half a pound of oats and vetches mixed; at 1 P. M. half a pound of hay, second quality; at 4 P. M. to 100 head, six sheaves of oats.

Buck lambs receive in the morning three-quarters of a pound of oats and vetches mixed; at 9 o'clock, drink; at 11 o'clock esparsette, half a pound; at 1 P. M. the same, at 4 P. M. to 100 head, four sheaves of oats.

Ewes of the first class get in the morning one pound of esparsette; at 9 drink; at 10 A. M. to 100 head, one metzen of potatoes, then straw; at 1 o'clock, three quarters of a pound of hay, third quality; at 3, drink; in the evening five sheaves of oats.

Ewes of the second class receive in the morning one pound of hay, third quality; at 9 watering; at 10, to 100 head, one metzen of potatoes, then straw in the yard; at 1 o'clock half a pound of chaff, with three-eighths of a metzen of oats, and four ounces of salt to 100 head; at 3 o'clock watering; in the evening, five sheaves of oats.

Ewes for sale receive in the morning one pound of hay, third quality; at 9 watering; at 10 straw in the yard; at 12, chaff, three-fourths of a pound, and with this three-eighths of a metzen of oats and four ounces of salt to 100 head; at 3 o'clock, watering; and in the evening five sheaves of oats.

The two years old ewes and wethers receive in the morning half a pound of chaff, with three-eighths of a metzen of oats and four ounces of salt to 100 head; at 9 drink; at 10 o'clock, half a metzen of potatoes to 100 head, and then straw in the yard; at 1 in the afternoon three-fourths of a pound of esparsette; at 3, watering; and in the evening four sheaves of oats.

Ewe lambs receive in the morning three-fourths of a pound of esparsette; at 9 o'clock, drink; at 10, to 100 head, half a metzen of potatoes, and thereafter oats and vetches mixed; at 10 o'clock, half a pound of hay of the second quality; at 3, drink; at 4 o'clock, three sheaves of oats.

Such lambs as have been born late in the season receive in morning three-fourths of a pound of oats and vetches mixed; at 9, drink; at 10, to 100 head, half a metzen of potatoes; at 11, lucerne, one-fourth of a pound; at 1 P. M., three-fourths of a pound of esparsette; at 3 drink; and at 4 o'clock, three sheaves of oats to 100 head.

Old wethers receive in the morning half a pound of steamed chaff; at 10 drink; from 11 in the morning to 4 P. M., pasture—(if prevented, at 1 o'clock steamed chaff, and at 3 drink;) and in the evening oat-straw.

DECEMBER.—Rams for coupling receive in the morning one pound of oats and vetches mingled; at 9, drink; then straw in the yard; at 11, esparsette half a pound; at 1, hay, second quality, half a pound; at 3, drink; at 4 o'clock six sheaves of oats.

Rams for sale receive in the morning one pound of esparsette; at 9, drink; then straw; at 10, oats and vetches mingled, half a pound; at 1, hay, second quality, half a pound; at 3, drink; at 4 o'clock six sheaves of oats.

Buck lambs receive in the morning three-fourths of a pound of oats and vetches mingled; at 9, drink; at 10 esparsette, three-fourths of a pound; at 1, clover, half a pound; at 3 drink; and at 4 o'clock four sheaves of oats.

Old ewes of the first class receive in the morning one pound of esparsette; at 9 drink; at 10, per 100 head, one metzen of potatoes; then straw; at 1 P. M., three-fourths of a pound of hay, second quality: at 3, drink; at 4 o'clock five sheaves of oats.

Old ewes of the second class receive in the morning one pound hay, second quality; at 9 drink; at 10 o'cl'k one metzen of potatoes to 100 head, and after this straw; at 1 P. M., three-fourths of a pound of chaff, with three-eighths of a metzen of oats and four ounces of salt per 100 head; at 3, drink; and in the evening five sheaves of oats.

Ewes two years old receive in the morning half a pound of chaff, with three-eighths of a metzen of oats and four ounces of salt per 100 head; at 9, drink; at 10 o'clock, three-fourths of a measure of potatoes to 100 head, and then straw in the yard; at 1 P. M., three-fourths of a pound of esparsette; at 3 drink; and at 4 P. M., four sheaves of oats.

The lambs and wethers receive in the morning three-fourths of a pound of esparsette or oats and vetches mingled together; at 9 drink; at 10 o'clock, half a pound of potatoes; at 11 o'clock, one-fourth of a pound of oats and vetches mixed, or of clover; at 1, P. M., half a pound of hay, second quality, or of esparsette; at 3 drink; at 4 P. M. three sheaves of oats, and the older ones four sheaves, to 100 head.

Old wethers and assorted ewes receive in the morning three-fourths of a pound of steamed chaff; at 9, drink; at 10 to 100 head, one metzen of potatoes, and then straw in the yard; at 1, esparsette, three-fourths of a pound, (or hay, third quality;) at 3, drink; at 4, steamed chaff, three-fourths of a pound.

Ewes of delicate health, and those which have produced twins, receive an additional portion at 11 o'clock in the morning, of half a pound of lucerne and a pint of barley-groats. During the time of coupling, those rams that have been put to great fatigue, receive daily from one half to two pints of oats, added to their food. In the season of pasture the flocks get twice a month salt to lick, two pounds and a half being allowed to 100 head; during the winter, however, only once a month, and then all those sheep which get chaff soaked in salt water for food do not share. Of strewing, twenty-five pounds are reckoned for 100 sheep.

Many will doubtless consider this way of feeding as too rich, and as not very econominal; yet the principle of abundant food, as observed in *Alcsuth*, cannot be recommended too highly; for experience has shown that between sheep well and those tolerably fed, there is regularly a difference of one-third in regard to the quantity of wool obtained. And then again, it is only by such abundant food that the smallest amount of mortality, as well as the largest increase and that development of their animal organism which gives the sheep, in all periods of its age, the highest capacities of breeding and fattening can be secured.

It is an undeniable fact that the manor of Alcsuth, in spite of many unfavorable circumstances, has been raised from its neglected condition to its present flourishing state, in a very short time, and by comparatively small expenditures, solely by means of breeding of cattle, and more especially a profitable breed of sheep. For now-a-days it is not the sheep of the finest silky and thin wool that give the highest profit to the farmer; but, on the contrary, it is those whose wool unites with the greatest compactness a proper degree of fineness; because the sheep of this class require smaller outlay as regards feeding, and in fact in every other respect; because they give more lambs, are less liable to sickness, and hence to mortality, and because they are better even for fattening; above all, however, because the finest wool very rarely fetches a price proportionate to its cost, in the market. With these leading views the Alcsuth sheep have been bred. This breed had its origin from the celebrated domestic sheep-folds of U. Altenbourg of Urmeny, and was developed into a peculiar and superior race, by the masterly treatment of the breeder. In its exterior, this sheep bears, in a high degree, the character of the *Infantado* race, which, improved and ennobled by proper cross-breeding, as it has been of late, constitutes now the aim of most wool growers.

The Alesuth sheep is distinguished by its strong-built, vigorous body; its head and neck are thick, its collar having many folds, its body stretched, its back broad and round shaped from the hip bones to the root of the tail; its legs, which are full clothed to the hoof, are rather short than long; its fleece is long, thick, uniformly curled, throughout good, middling fine and uniform.

It is not easy to give the reader an idea or description of the fineness of the wool in words. By the Dolland wool meter, the fineness would be expressed by the quotient of the third class, viz. by 0,0006. Still, to supply those who have no opportunity of seeing the Alcsuth flocks, with a surer standard whereby to judge of the fineness of their wool, a list of prices is subjoined, at which the Alcsuth wool was sold during the years 1838 to 1841, and which was as follows, (by the cwt.)

In 1838,	Conv. money, Fl. 145	=$72½
" 1839,	158	= 79
" 1840 and '41, (when prices were much depressed,)	128	= 64

If it is considered that these prices were paid without any allowance for loss in weighing out the wool, and in fact without any kind of deduction whatsoever, no one can fail to perceive that the quality of the wool must be good and suitable to use. What gives the Alcsuth wool a particular value, and renders it so much sought after, is that its evenness is not confined to single heads, but extends over the whole flocks.

Another thing of great moment is the unusual productiveness of wool, as obtained by the Alcsuth sheep; for thickness and length are so well combined in this wool, that its want of fineness can be of no account whatever. The average weight, as ascertained by personal examination, and by reference to the bills and books, is as follows:

With the ram,	3 lbs.
With the wether,	3½ "
With the ewe,	2½ "
With the lamb,	26 32

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Pomological Convention at New York.

In accordance with previous notice, this important convention assembled at Clinton Hall, in New-York city, on the morning of the 10th ultimo. Delegates were in attendance from a large number of the States of the Union, including many of the most eminent pomologists of the day. It continued in session for three successive days.

The convention was organised by the appointment of **Marshall P. Wilder**, of Massachusetts, President; and **S. B. Parsons** and **P. Barry** of N. Y., and **Geo. Deacon** of N. J., Secretaries, with a vice-president from each of the states of Massachusetts, Vermont, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Virginia, Ohio and Missouri.

After the reception of credentials, and the appointment of the necessary committees, the convention adjourned till the morning of the 11th. The remainder of the day was chiefly occupied with the arrangement of the numerous collections of fruit brought together on the occasion. These collections occupied tables variously distributed through the hall, all labelled and conspicuously displayed, so as to be at all times accessible to the inspection of the members of the convention.

Among the larger contributors, we noticed the following:—

Massachusetts—Samuel Walker, Roxbury, 60 varieties of pears; B. V. French, Braintree, 73 varieties of apples; J. M. Earle, Worcester, 13 of pears, 10 of apples; M. P. Wilder, Dorchester, 120 of pears; R. Manning, Salem, 110 of pears, 36 of apples, 3 of quince; H. H. Crapo and Jas. Arnold, New Bedford, collections of pears; A. Foote, Berkshire county, apples and pears.

Connecticut—Collections from Dr. Munson, G. Olmsted and others, and 32 varieties of the apple from —— Buell, of Richfield.

New-York—Dr. Valk of Flushing, fine specimens of 12 varieties of grape; Wm. R. Prince & Co., apples, pears and peaches; Charles Hamilton, Canterbury, 21 varieties of apples, three of plums; A. J. Van Slyke, Coxsackie, 19 apples, 9 pears; Ellwanger, Barry and Rowe, Rochester, 44 of apples; B. Hodge, Buffalo, 27 apples, 19 pears; H. W. Sargent, Fishkill, 15 pears, 9 grapes; Thorp and Smith, Syracuse, 27 apples, 4 pears; J. Battey, Clinton Co., 29 of apples; Charles Downing, Newburgh, 21 varieties of apples; D. F. Manice, Hempstead, L. I,, pears, grapes, &c.; W. L. Ferris, Westchester, 12 pears; J. J. Thomas, Macedon, 32 apples, &c.; Jas. H. Watts, of Rochester, also presented fine specimens of Northern Spy; T. A. Smith, of Syracuse, a bushel of large and showy specimens of the Onondaga pear; J. J. Thomas, Macedon, half a peck of fine and fair specimens of White Doyenne pears taken indiscriminately from a tree which bore 12 bushels the present season, and which had stood 20 years in grass ground without manuring.

New Jersey—Thomas Hancock, Burlington, 18 apples, 14 pears, &c., J. Pullen, Hightstown, 22 apples.

Pennsylvania—D. Miller, Carlisle, 22 apples; R. Buist, a fine showy bunch of genuine Tripoli grape. &c.

Ohio—F. R. Elliott, Cleveland, 30 apples and several pears; McIntosh & Co., Cleveland, 43 pears, 53 apples.

Besides these, there were many smaller collections from various parts of New England and the middle states, and from Virginia and Kentucky.

During the intervals of the sessions, the delegates in attendance were enabled to inspect numerous collections, but all examinations of quality *by tasting* were made by the Fruit Committee in a separate room. This committee, after much care and thorough deliberation, presented the following select list of fruits, worthy of general cultivation, which was adopted after considering each variety, one by one, by the convention. In preparing the lists, the committee, (which consisted of A. J. Downing, Thomas Hancock, J. J. Thomas, Robt. Buist, Robert Manning, Herman Wendell, Josiah Lovett, L. C. Eaton, and Geo. Gabriel,) rejected every variety against which there were found to be three votes, and none were adopted which had not been widely cultivated:—

Apples—Early Harvest, Large Early Bough, American Summer Pearmain, Gravenstein, Summer Rose, Early Strawberry, Fall Pippin, Rhode Island Greening, Baldwin, Roxbury Russett. *Adapted to particular localities*, Yellow Bellflower, Esopus Spitzenburgh, Newtown Pippin.

Pears—Madeleine, Bloodgood, Tyson, Bartlett, Seckel, Flemish Beauty, Beurre Bosc, Beurre D'Aremburg, Winter Nelis, Golden Beurre of Bilboa. *Adapted to particular localities*,—White Doyenne, Gray Doyenne.

Cherries—Black Eagle, Mayduke, Graffion or Bigarreau, Black Tartarian, Knight's Early Black, Downer's Late, Elton, Downton.

Plums—Jefferson, Washington, Green Gage, Purple Favorite, Coe's Golden Drop, Bleecker's Gage, Frost Gage, Purple Gage. *For particular localities*, Imperial Gage.

Peaches—Grosse Mignonne, Early York, (serrated,) Large Early York, George IV, Oldmixon Free, Cooledge's Favorite, Crawford's Late, Morris White, Bergen's Yellow. *For particular localities*,—Heath Cling.

A committee appointed for the purpose, reported the following resolutions, which were adopted:—

Resolved, 1, That the Convention be designated the American Congress of Fruit Growers, and that the members or substitutes, and officers thereof, be regarded as holding their respective appointments for two sessions.

2. That all Pomological, Horticultural, and Agricultural associations of North America, be invited to send delegates to this Congress.

3. That at the close of the present session of this Congress, it be adjourned to hold its second session in the city of New-York, on the first Tuesday of October, 1849.

The following fruit committees were appointed from the different states:—

Massachusetts—Samuel Walker, F. W. McCondry, P. B. Hovey, J. Lovett, R. Manning, M. P. Wilder.

Connecticut—G. Gabriel, Dr. A. T. Munson, H. W. Terry, George Olmsted, Dr. V. M. Don.

Rhode Island—Lewis C. Eaton, Stephen H. Smith, Alfred Smith, J. Stimson, —— Comstock.

Vermont—R. Mattison, M. Slocum, C. Goodrich, B. F. Fay.

Maine—H. Little, S. L. Goodale.

New-York—A. J. Downing, J. J. Thomas, Dr. H. Wendell, P. Barry, B. Hodge.

New-Jersey—H. W. S. Cleveland, R. S. Field, I. Pullen, T. Hancock, J. W. Hayes, J. S. Chambers.

Pennsylvania—Dr. W. D. Brinckle, E. W. Keyser, Thomas P. James, R. Buist.

Maryland—S. Feast, Wm. Corse, L. N. Rogers.

Dist. Columbia—Joshua Pierce, J. F. Callan, W. Breckenridge.

Ohio—A. McIntosh, A. H. Ernst, Dr. S. P. Hildreth, F. J. Scott, T. S. Humrickhouse.

Indiana—J. D. S. Nelson, D. Ivinhart, —— Scott.

Illinois—Dr. J. H. Kennicott, Jno. Wright, J. Y. Scammon, —— Arnold, Prof. J. W. Turner.

Kentucky—L. Young, Ward Brown, H. Duncan, J. Allen, G. W. Weissenger.

Missouri—Thomas Allen, L. Russell, Jas. Sigerson, Nicholas Reibl, E. Mallenchrodt.

Canada—Dr. C. Beadle, Jas. Dougall.

Pomological Convention at Buffalo.

Continued.

The following decisions were made relative to

APPLES:

The *Yellow Harvest*,—this name being adopted in preference to Early Harvest, as being more descriptive,—worthy of general cultivation.

The *Tart Bough*—three weeks later than Yellow Harvest, which it resembles,—and second rate in value from its lateness.

St. Lawrence—regarded by most as first rate,—by others as not fully so, but to be admired for its size, beauty and vigorous growth.

Dyer, or *Pomme Royal*, known also in some parts of Western New-York by the name of *Hollow Crown*, first rate.

Early Joe—regarded by all as of the highest quality when fresh from the tree. But it was stated by several that it would lose much of its flavor in a day or two, and is therefore unfitted for a distant market.

Early Strawberry—first rate for its season.

Sweet Bough—a first rate sweet summer apple.

Sine Qua Non—first rate.

Toole's Indian Rareripe—first rate for cooking, second rate for the table.

Minister—large and handsome, second rate.

Summer Rose—first rate.

Summer Queen—first rate for cooking, second for the table. A sweet apple, ripening the same time, and known as the *Augustine*, is sometimes erroneously called Summer Queen. The latter was decided to be third rate.

Duchess of Oldenburgh—first rate for cooking, second for table.

Fameuse or Pomme de Neige—voted, but not unanimously, to be first rate, in northern regions especially.

Rhode Island Greening—a first rate standard fruit, both for table and cooking.

Red Astrachan—passed by. It should have been stated to the convention that this variety, although not a good table fruit, possesses great excellence as a very early *cooking* apple, being far superior in this respect to the Yellow Harvest.

Newtown Pippin.—Much discussion took place relative to this celebrated variety. Several delegates regarded it unworthy of cultivation in western New-York, on account of its defective fruit. Others regarded it of the highest value; and facts were stated showing that in instances where it had been invariably poor, its quality had been greatly improved by rich cultivation, and particularly by the application of ashes.

The *Yellow Newtown Pippin* was considered inferior in quality.

A half bushel of the *English Russet* of Downing, was presented to the convention—they were of last year's growth, and were quite fresh, sound and agreeable. As the name English Russett was not considered sufficiently distinctive, it was concluded to call this variety the *Poughkeepsie Russett*, by which it is also known. It was decided to be first rate as a long keeper, and second rate in quality for the table.

Lowell Apple—known also as *Orange*, *Oswego Orange*, *Tallow Apple*, or *Tallow Pippin*, and at Cleveland as *Queen Anne*, and remarkable for its oily surface a few days after it is gathered. Though not fully first rate in quality, it was decided to be worthy of cultivation on account of its large size, fair and handsome appearance, and great productiveness.

Westfield Seek-no-further—first rate.

Vandevere—first rate.

Ribston Pippin—third rate, except in northern regions, where it proves fine.

The *Northern Spy* created much discussion. It was admitted to require good cultivation, and careful pruning, to develope its fine quality—that the Rhode Island Greening, and Roxbury Russett would flourish where the Spy would be nearly worthless—but that, with proper treatment, the latter was a fruit of high excellence.

Twenty Ounce—first rate in size and beauty, second in quality.

Gravenstein—first rate.

Esopus Spitzenburgh—first rate.

Beauty of the West—third rate.

Fall Pippin—first rate in every respect.

Late Strawberry—first rate.

Swaar—first rate in all respects.

Bellmont, *Waxen*, or *Gate*—first rate.

Hawthorndean—unworthy of cultivation.

*Mother Apple**—first rate.

Baldwin—first rate in Massachusetts and New York, unsuccessful in Ohio.

Jonathan—first rate, taking all its qualities into consideration.

Porter—first rate in all localities.

Rambo—first rate, and succeeding equally well in the Eastern and throughout the Western states.

Hubbardston Nonsuch—first rate—only equalled in richness by Swaar, Esopus Spitzenburgh, &c.

Pomme Grise—first rate in the North and in Canada.

Gloria Mundi, or *Monstrous Pippin*—unworthy of cultivation.

Bullock's Pippin, or *American Golden Russet* of Downing, the former name recommended by the convention—worthy of general cultivation.

Jersey Sweet—first rate for its season.

Cornish Gilliflower—unworthy of cultivation.

American Summer Pearmain—first rate.

King of the Pippins—second rate.

Summer Hagloe—distinct from the Hagloe crab—first rate, but not unanimously.

Office of Leaves—Singular Occurrence.

The past season has been unusually favorable to the occurrence of leaf-blight in plums and pears, in many parts of the country. Not only have seedlings been seriously affected, so as to lose nearly all their foliage in midsummer, but large and bearing trees have often become more or less stripped, and, as a well known consequence, the quality of the fruit has greatly suffered.

A singular occurrence, showing that the flavor in maturing, depends wholly on the office of the leaves, was the following:—The crop of a Yellow Gage Plum tree, by means of daily attacks on the curculios, was saved from their punctures, and promised a fine supply. But when the fruit was two-thirds grown, and of course wholly destitute of any good flavor, the leaves all dropped from the tree; not one was left. The branches were perfectly bare, with the exception of the load of plums which half obscured them. The plums remained on the tree, without changing any in size, color, or taste, while others on trees not so affected, were rapidly ripening round them. In two or three weeks, a second crop of leaves appeared, when the fruit immediately commenced a second growth, and attained full size. It subsequently assumed the usual color, and all the richness of flavor of well ripened specimens, and was about one month later than the usual period of maturity.

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* Printed erroneously "*Northern*," in the proceedings of the convention.

Other varieties, affected with leaf-blight, presented similar results, but less striking; and nearly all of them soon after the appearance of the second growth of leaves early in autumn, were also observed with a thin crop of blossoms.

Address of David Thomas,

Before the Buffalo Horticultural Society.

We briefly alluded to this address in our last number. Its merits are of a high order. We regard it as one of the best productions of its distinguished author. With the hope of inducing our readers to procure it, we give a few brief extracts:—

The following remarks on *a taste for flowers*, have much point:—

" Does any animal except man, enjoy the beauty of flowers? I presume not, having never seen any indication of the kind, though hundreds of insects regale on their nectar. Our love of flowers must then be considered as evidence of a higher organization; and those who cannot appreciate it, suffering from the want of some phrenological development, have claims on our sympathy. Yet as organs are said to be enlarged or diminished, according to our moral or mental training, so many of our friends now shut out, may indulge the hope of rising hereafter, to the enjoyment of more glorious objects, and of purer and more elevated pleasures."

The subject of the various shades of color is vividly illustrated:—

" Occasionally we meet with tastes that are partial or averse to particular colors; and this state of mind may arise from impressions perhaps long since forgotten. If we had only seen in early life (as the poet says,)

'Where tawdry *yellow* strove with dirty *red*,'

we should doubtless have acquired a distaste for those colors; and probably without perceiving it at the time. That it would be a prejudice however, must be evident when we look at the rainbow or prismastic spectrum—so clear, so free from every tinge or impurity of earth, that we rejoice in the whole seven colors and know not which to prefer.

" Pure white, as we see it in a sunbeam coming through a clean atmosphere, is the blending of all colors in certain definite proportions; and when it is impure, a surplus or deficiency of some color must cause it. The colors of most flowers are mixtures. The purples are rarely, if ever, pure, being only the intermingling of red and blue.—The prismatic colors exhibited in flowers, however, with rare exceptions, are only *six*, for *green* in Botany, like *black* in Optics, is not considered a color.

" The intense blue of some Alpine flowers, has been ascribed to the deep hue of the sky that bends over them; but the constant supply of moisture may be a better reason. Finer colors may have been observed in some species near brooks in summer and autumn, than on similar plants that stood on dry banks above them."

The following facts, of a practical character, cannot fail to be interesting to the cultivator of flowers:—

" The winters of Western New-York, are as favorable to herbaceous perennials as those of Philadelphia —perhaps more so—but they are less favorable to half hardy shrubs. Our heavy loams freeze not half as deep as theirs, owing in part to more clouds at that season—the condensed vapor of our lakes—that obstruct the radiation of heat; and to more snow at the time of our severest cold. Plants that lie snug under this mantle, are as safe as they would be in England; and we need only be apprehensive of danger, immediately after an untimely thaw. With half-hardy shrubs, however, it is different. Over our snows, winds below zero frequently sweep along; and when spring returns, we often find all *above* the snow-line *dead*, and all *below* it *alive*, and in the best condition.

" Bulbous plants from warm climates, that can bear much depth of earth, do well under our northern sky. Perhaps the number, however, is not great, though I know of but few experiments in this line; but *Amaryllis longifolia* from Southern Africa, is quite at home in my border. It has been there 15 or 20 years. It was planted about ten inches deep; and this depth has been increased by turning a sod, or throwing litter over it. It has produced leaves four feet long.

Another bulb—*Pancratium maritimum*—from the sea coast of Southern Europe, after a trial of four years, is now doing well in the open border, among sand and peat. It is not more than six or seven inches below the surface; but then it is in a *sunken* and not in a *raised* border,—a difference in position worthy of particular notice. For the first two years, it was not vigorous; but on sprinkling salt round it at different times, it became healthy; and it is now in the most flourishing condition, having produced two fine umbels of flowers the present season. They are white, star-like and two inches in diameter.

" *Amaryllis belladona*, from the West Indies, has also withstood the last winter under similar circumstances. Owing perhaps to habits contracted in the green-house, it started to grow late in the fall, which was a wrong movement; and accordingly, its leaves were cut down by the frost; but it is growing again."

The construction of a very simple support for *pillar roses*, is thus described:—

" Perhaps the best method of training the tall-growing kinds, is on pillars. Two years ago, I had pieces of scantling, twelve feet in length and three inches by four, planted as posts, first perforating them in five or six places with a two inch auger. Through these holes the stem of the rose is drawn. As it lengthens, this operation should be repeated from time to time, till it reaches the top, about nine feet high; and as it depends on no decaying cord or bandage for support, it cannot be blown down by the wind.

" To insure these posts from decay, inch auger holes near the ground were bored, slanting downwards, not quite through, and filled with salt. Some persons have used plugs in their posts to keep out the rain; but it is best to leave them open for a time, till the wood becomes saturated with brine. As the salt dissolves, more should be supplied—say two or three times a year.

"To obtain a finer display, I have planted roses of different colors on opposite sides of the posts, intertwining their branches. At one, I have the *tea scented Ayrshire* and *Violet Episcopal*, by way of contrast; and at another, the *Baltimore Belle* and *Queen of the Prairies*. I have sixteen posts of this description, and have obtained, expressly for this purpose, a sufficient number of tall-growing kinds. Further experiments are wanted, however, to determine what sorts can be most fitly associated, and what shades of color will harmonize the best."

The following reasons for cultivating a general selection of fruit, are well worthy of consideration:—

" But why do we want so many sorts of fruit? For the same reason that we want so many sorts of food: the pleasure that springs from variety. Another, not less cogent, however, might be given. In proportion to the number of kinds cultivated, are the chances for a supply in unfavorable seasons,—for the frost often destroys one sort, and leaves another; and continued rains induce decay in some, and not in others, especially among plums and cherries. Some fair-skin varieties of the latter, have been almost worthless this year; and some of the black have suffered, while the acid sorts, as the Mayduke and Morello, have generally escaped. Let us, therefore, have many kinds, and if the best sometimes offer nothing, let us have the second best."

We close by quoting the following interesting statement of an experiment, and reminding our readers that what we have here given is only a fair sample of the rest of the address, of which we have given but a very small portion:—

"Last fall, I had many late planted cabbages that formed large tufts of leaves, but not good heads; and I had a hope that if I could preserve them till spring, they might grow into something useful,—so they were set in a trench, very closely, side by side—some straw was thrown on them—and over that about two inches of earth. As the trench was ten or twelve feet in length, two tubes were set in near each end, to let off the bad air—just such as every cabbage depot under ground, or potatoe heap ought to have. In the spring, I was surprised at the result. Every green leaf had disappeared—the larger plants had formed good heads, though not so compact as grew in the open air, and all were beautifully blanched and fit for use."

I. Grape Grafting.

Eds. Cultivator—In your May No., at page 148, you published an experiment of mine in grafting the July Grape upon our common hardy varieties. I have now the satisfaction to state to you that two of these grafts were in flower before they were one year old, and are now actually presenting clusters of fruit.

II. Budding the Hawthorn with Pears.

In 1847, August 24th, I budded about sixty Hawthorns of three or four years of age with pears, chiefly the Beurre de Capiaumont and White Doyenne varieties. The buds nearly all took. But they broke much later and more slowly than those on quinces beside them. One of them is even now, (August 17th,) but just opening. Many of them after opening, remained a long time, a mere rosette of leaves. A few even now remain in this condition, and may not probably advance any farther until next year. But the most of them have made from six to thirty inches of wood, and appear healthful. Many, on first putting out, grew nearly at right angles with the stock for some time. This seems to be occasioned by a greater degree of rigidity in the bark than that exhibited by the quince. This experiment, though appearing very discouraging in the early part of the season, is likely to result well. I need not say that they were budded as near the ground as possible, some even below the ordinary level.

III. Various effects of Winter on Quinces.

In the winter of 1846—7, which was quite open, my quince trees every where suffered very severely, losing much of the wood in the previous year's growth.

During the winter of 1847—8, which was even more open, they suffered hardly at all with the exception of one row, and those my finest trees, which were amply protected by a high Hawthorn hedge. These last were badly injured, some of them being killed, root and branch. This result was occasioned doubtless, by the excitement of the circulation at an untimely period.

IV. Experiment with an Asparagus Bed.

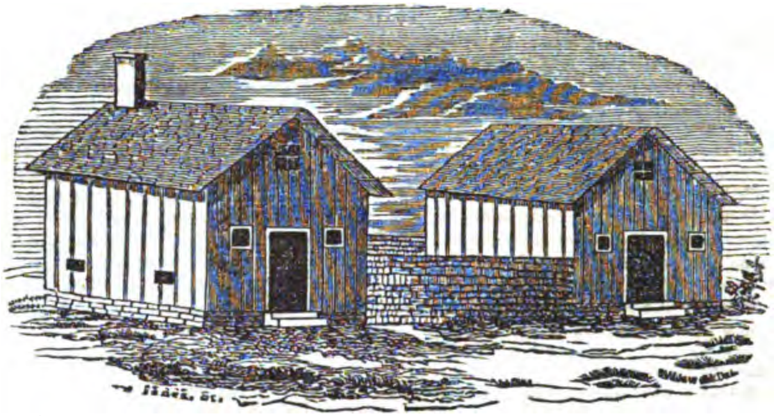
This bed is about four years old, and contains thirty square rods. It was originally put in too superficially, the crowns of the plants coming almost to the surface; nor had the soil been perfectly freed from quack grass. So foul had it become by the 9th of June, of the present year, that it was almost impossible to cut for market. I mowed over the whole bed on that day, cutting down quack, weeds, and young seedling asparagus. I then hoed it as deeply as the superficial character of the bed would permit, pulling out the quack as much as possible and stirring up the manure that had been put on in the spring. The consequence was, the renewal of my bed in its productiveness, while I did not lose more than four or five days' use of it;—"a good operation," as they say.

The Sunflower.

Eds. Cultivator—I am desirous of gaining information in relation to the culture, management, and yield of the sunflower, as also the usual amount of oil that can be expressed from it. If any of your subscribers will furnish the required information, they will much oblige yours, &c. W. I. I. *Canada West, September*, 1848.

Montreal Agricultural Society.—The *Montreal Herald* gives an interesting account of the exhibition of this Society. A much greater interest is said to have been manifested in the show than on former occasions. The finest part of the show was said to be the horses, of which there was a large number of fine ones. Great improvement was observed in the cattle. The Short-horn bull *Timour*, owned by Mr. Hays, of Montreal, (bred by Mr. Prentice, of Mount Hope,) is very highly spoken of. A bull, a cross of the Ayrshire and Galloway, is said to have attracted great attention. There was a fine display of poultry, chiefly by Mr. Hays and J. E. Guilbault—the latter showing 14 choice varieties of fowls.

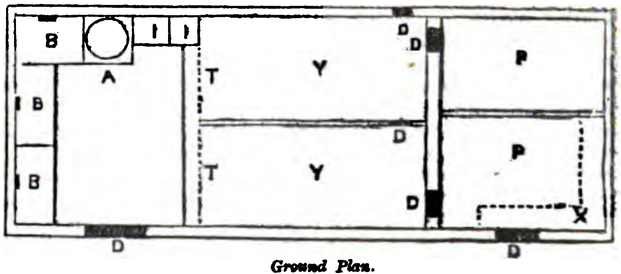
The Peacock.—The natural disposition of the peacock is selfish and gluttonous, and it is only by pampering this weakness that he can be persuaded into obedience and attachment. He is vain, and at the same time ungallant. He is far from manifesting the politeness and attention which the common cock shows towards his mates. The peacock will greedily snatch from the mouth of his hens those titbits and delicate morsels which the cock would either share with his favorites, or yield to them entirely. The peahen, in return, cares less for her lord and master, and is more independent of him when the breeding season is over. She then regards the display of his tail, his puffings and struttings, and all the rattling of his quills, with the coolest indifference. Nor does *he* seem to care about *her* admiration, or to make all this exhibition of his attraction to secure *her* notice, but is content if he can get some astonished hen, or silly, bewildered duck, up a corner, to wonder what all this fuss is about. Like other vain coxcombs, he expects the lady to make the first advances. Although occasionally cruel, the peacock is shy of fighting, particularly when in full plumage; nor do they so frequently engage with each other as with birds of a different species, such as drakes, cocks, &c. One, out of feather, was seen to keep up a three hours' struggle with a musk drake; but had it been in full plumage, it would not have shown fight at all. Their probable term of life is 18 or 20 years. They may be eaten as poults at nine months old. If fatted, they should be shut up together with any turkeys that may have been in the habit of associating with them, and fed exactly the same. If confined alone, they pine.—*Ag. Gazette.*



PLAN OF A PIGGERY.

[The accompanying cut and description of a piggery, which we take from the *Transactions* of the N. Y. State Agricultural Society, received the premium at the January meeting, 1848.]

I forward you my plan of a piggery and other necessary fixtures, which I have in contemplation, and am preparing to put up, on a tasteful and cheap scale, within the reach of every thriving citizen in our State.



Ground Plan.

The cost of construction will depend much on the finish. The ground plan of the two buildings, which includes a yard between them, is 40 ft. long and 14 feet wide, which may cost from fifty to ninety dollars. A good mechanic has promised to do all the labor, after the foundation was laid, for forty dollars, the boards to be planed and matched. Unless the buildings are to be painted, I would recommend that the boards be put on in a rough state, and white washed with a composition of stone lime and water lime. To construct a good cellar would cost about thirty dollars more.

This plan might be enlarged; I have designed it for six fattening hogs, or for one breeding sow and three porkers. "Millionares" may require something more expensive, but this is sufficiently spacious for the common citizens of Vermont. The two upright buildings represent the swill house and the piggery. Both are fourteen feet long and twelve feet wide, the posts ten feet.

The ground plan of the first building contains the arch A, for cooking, where boilers and steamers will be placed sufficiently large to accommodate the number of hogs to be fed. The feeding troughs also, T, T, are included in the same building, which is made of white oak plank, and extends the whole length of the house, except the space occupied by the tubs or vats, I, I, which are convenient for the cooked food, swill, &c. One of them may contain the warm food, the other in a process of fermentation, to be fed at any time. The dots on the yard side of the house and feeding trough, T, T, represent standards of iron or white oak, arranged along and close to the outside of the trough, at suitable distances to allow the heads of the swine to pass between them into the feeding trough. The sill on this side of the house is raised and framed to the posts two feet above the common level of the other sills, and these standards or pins which prevent hogs from getting into the trough or house, are framed into the sill above, and the feeding trough; the plank which forms the bottom of the trough may project on the outer side for that purpose, or the plank may be of such thickness as to enter the upper edge.

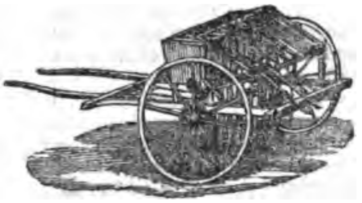
B, B, B, are bins for apples and roots, in each of which a window opens for the purpose of shoveling them in, two of which are seen in the upright part. The hogs are to lodge in the pen, and can pass from their apartments, P, P, through the yards, Y, Y, to the feeding trough, T, T; a partition divides the sty or open yard, and extends across the piggery, forming two sleeping apartments, P, P, and two yards, Y, Y; six doors and passage ways opposite, D, D, D, D, D, D. The main door in the piggery opens into the passage, X, 2½ feet wide, for the convenience of the attendant to carry in straw, &c. The open yards may be used for litter, and to manufacture manure; these occupy space enclosed between the two upright buildings, and are 16 feet long.

The floor of each building and the yard should be flagged with stone or brick, secured from frost. The sills of the two main buildings are raised upon a wall 18 inches. A cellar may be constructed under the first building for the storage of roots; if seven feet deep, will hold 600 bushels, allowing 2420 cubic inches to the bushel. A convenient wheel and windlass is arranged in the loft of this house, for handling the hogs at the time of killing, and may be convenient for dressing other animals.

There are many piggeries in this State constructed about 30 feet long and 20 feet wide, which contain all the cooking apparatus, the hogs, grain in the loft, and sometimes a wool room, which form a complete nuisance. I am opposed to feeding swine in close buildings where they make their litter, and cooking food under the same roof. The effluvia cannot be very pleasant for man or beast. Truly yours,

S. W. Jewett.

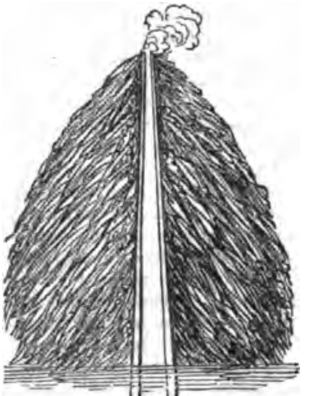
THE FARMER'S NOTE BOOK.



Sherman's Seed Planter and Cultivator.

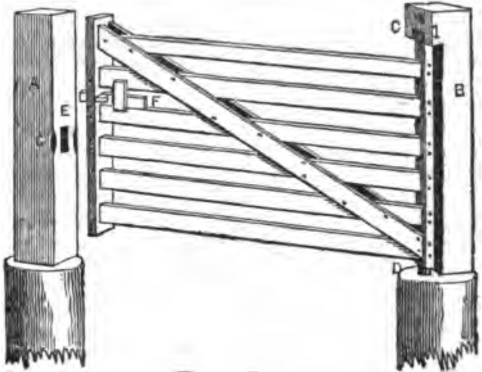
The above is a cut of a machine invented and patented by J. W. Sherman, of Ontario, Wayne county, N. Y. It is designed for the following purposes:—1, to plant all kinds of grain in drills or rows; 2, to sow all kinds of grain, plaster, lime, ashes or bone dust, broadcast; 3; to be used as a cultivator for any kind of hoed crop. It is simple in construction and may be readily changed in adapting it to its various purposes. The inventor describes its operation as follows: "All the tubes, or either or any part of them, can be raised or lowered into the ground, with ease; and with one motion of the hand, the grain can be stopped or started at the same motion, without stopping the team. Any one can alter the machine in one minute, so as to sow from one peck to four bushels of grain, or from one to twenty bushels of plaster, or other fine manure, per acre." It is recommended as capable of sowing all kinds of seed—such as that which is soaked and plastered, or that which is light and husky. Even cotton and carrot seed, it is said, can be sown with accuracy, in any quantity per acre. We saw this machine at the late State Fair, and were pleased with its appearance. It received a premium from the State Society.

Stacking Corn Fodder.



The practice of sowing two and a-half bushels of corn per acre in *thick drills*, exclusively for fodder, is rapidly extending through the country, farmers discovering that they can in this way obtain the richest food for wintering cattle which will be wholly consumed, and be preferred to the best hay,—at a cost never exceeding a dollar and a-half per ton, on good land in the country. In planting, the corn is strewn from a hand basket rapidly in the one horse furrows, to be as quickly covered with a common harrow; no hoeing, and but once cultivating, is ever needed; and all weeds are so effectually smothered, that the ground is left as clean as a neat woman's floor.

But thus easily raised, the fodder must be well preserved, or the labor will be lost. If put up in shocks, they should dry several weeks—the *leaves* may be quite dry, while the stalks will furnish moisture enough to cause hot fermentation, mouldiness, or decay. Stacks of this kind of fodder settle very compactly, and the steam from the heating, which must always take place, will not find vent, unless a chimney is made in the middle of the stack, by setting three or four rails, upright in the ground, a foot apart, to form the centre of the stack, as shown in the above figure. A further precaution, highly essential, as well as useful, is to *salt* well the fodder while the stack is going up. Stacks of small size should be preferred, and so placed that in case of much heating, they may be thrown with a fork into a new stack, which is often necessary under unfavorable circumstances.



Farm Gate.

Eds. Cultivator—The above represents, or at least is intended to represent, a farm gate, which in cheapness, convenience and comparative simplicity, of construction, is not excelled by any which has come to my knowledge. I have one on my farm, built by myself, without the aid of carpenter or blacksmith, and commanding general satisfaction.

A. and B. are posts, hewn out of cedar, locust, or rich yellow pine—B. is cut and morticed out in such a manner that the gate can be enclosed in the top part C., by a piece of wood slipped in dove-tail fashion. In the bottom, a 1½ inch auger hole contains a rich pine knot D., with a round tenon on top; this is received in a hole bored in the bottom of the gate piece; so that by this arrangement it is kept off the ground, and top and bottom of the principal part of the gate, are secured against the injurious effects of water, while the greasy nature of the pine knot on which it turns, causes each movement of the gate to be easy in every kind of weather.

A. has a hole, E., morticed in its centre, to receive the tongue of the latch F.; the last is made according to the model given in your vol. for 1847, page 159.

You will observe that this gate has no iron about it, and opens to its full extent either way, while the latch, by being thrown back with the gate, slips over the notch at G. and shuts itself.

Lightness is one of the main requisites in this subject to keep it from swagging; I have obtained this by making my gate out of ¾ stuff, and the scantling holding the latch 2½ inch square.

In my next I will send you a plan of a machine for drawing hickory, oak and other shrubs out of the soil. Alb. C. Richard. *Walden's Ridge, Hamilton Co., Tenn., Sept.* 1848.

On the Use of Fish for Manure.

Messrs. Editors—In those towns in this section bordering on the seacoast, White-fish are extensively used as manure, for all kinds of crops. The price of them varies from 50 cts. to $1.50 a thousand, the aveage price being about $1. They are caught in large numbers from May till October, in schools varying from 100 fish to 100,000, and are applied to the soil in various ways. Some persons, during the hurry of haying and harvesting, spread them on the surface of the ground, and allow them to dry up by the sun, a stench in the nostrils of every passer by. Others spread them year after year on their rye stubble, as long as they can get ten or fifteen bushels of rye per acre, and until their land is actually fished to death, and overrun with sorrel and noxious weeds.

They are usually spread evenly over the surface of the ground, at the rate of about 10,000 to the acre, and plowed in in the course of twenty-four hours, it being less work than to compost them. But the best way in which they can be used, is to mix them intimately with muck and coalpit dirt, and let them remain over the winter, when they will be changed into a black inodorous mass, forming one of the richest and most valuable composts known. Ten thousand of them composted in this way, at a cost of ten dollars, will produce a rotation of crops without any other manure—say from one to two hundred bushels of potatoes, or fifty bushels of corn, thirty bushels of rye, and two or three crops of grass. This compost spread upon old grass lands, has a most surprising effect. A YOUNG FARMER. *Madison Conn., Sept.* 22, 1848.

Greenbush Premium Farm.

The Rensselaer county Agricultural Society offer premiums for the best cultivated farms in the several towns in the county. From the report of the doings of this society for the present year, we find that our friends Messrs. McCULLOCH & KIRTLAND, occupants and owners of the *Cantonment Farm*, Greenbush, have been the successful competitors for that town. Having on several occasions visited this farm, and witnessed its judicious management and its progress in improvement, we readily endorse the statement of the committee. The examination by the committee was made on the 16th of September last. We give the following extract from their report:

"The farm is situated about one and a-half miles east of the lower ferry to the city of Albany; contains about 130 acres, all in cultivation, and is a part of the tract of land upon which the United States barracks were erected during the last war with Great Britain. It was purchased by Mr. McCULLOCH of the government in 1831, and was then in a deplorably neglected condition; a portion of it having been under the plow for many years in succession, by which it had become greatly impoverished; another portion was wet and marshy, producing only a scant and sour herbage, and the whole nearly overrun with bushes. Mr. McCULLOCH immediately commenced a system of improvement and melioration by clearing, ditching, underdraining, and manuring; which, with a judicious rotation of crops, has been continued to the present time, and has resulted in converting a tract of land, unsightly in appearance, and by many deemed nearly worthless, into one that will compare with any in the county for productiveness and beauty.

"The face of this farm is partly undulating and partly nearly flat; the soil of the former portion is a sandy loam, well adapted to a convertible system of husbandry; that of the latter is a clay loam, with a close subsoil, equally well adapted to meadow and grazing.

"The principal production of this farm is milk, which is carried to the Albany market. The present stock consists of 27 cows, 3 head of young cattle, 4 horses, and 10 swine. Mr. KIRTLAND informed your committee, that the entire product of the 27 cows for the year ending with the date of the visit of your committee, was 64,005 quarts by actual measurement, [being an average of about 6½ quarts per day to each cow, the year round.] The stock of cows are in admirable keeping; several of them are fine specimens of the improved Durham breed and its crosses, and, taken together, your committee have seldom if ever witnessed as fine a stock of cows as that upon this farm.

"About 45 acres of the farm are in pasture, and about the same quantity in meadow, which it is estimated will produce a surplus, after wieter-feeding the stock, of 25 tons of hay."

It is a practice with Messrs. McC. & K., to plow their pasture and mowing grounds in August and sow them to rye and grass-seeds, the principal object being to renew the grass as soon as practicable. We are told that they have sown 12 acres in this way the present season. The usual yield of grain thus obtained is 20 bushels per acre.

As this is a grazing farm, the principal object is to keep the land in grass, and hence but a small portion is at any time appropriated to grain or roots. Of the cultivated crops for this year, there were 7½ acres in barley, which was sowed 25th April, with two bushels of the two of the six-rowed variety to the acre, and ten pounds of clover and half a bushel of timothy seed to the acre. There were 2½ acres in oats; three acres in potatoes; and four acres in Indian corn—the latter after potatoes, which were planted upon sward without manure. The corn was manured with compost in the hill, and planted on the 16th of May.

As the yield of these crops was only taken by estimation at the time they were examined by the committee, we have applied to Mr. KIRTLAND for the results actually obtained; and he informs us that the barley turned 44½ bushels per acre—weighed 47½ pounds per bushel, and sold for 76 cents per bushel—being one cent per bushel above the market price; the oats gave 6[illegible] bushels per acre, and the corn 75 bushels. The potatoes suffered by the disease, and only gave about half a crop.

Hoove in Cattle.

Perhaps there is not a greater loss of cattle in this country, from any one cause, than from the complaint known as *hoove* or *blown*. It is a distention of the rumen or paunch, by gas arising from vegetable substances, which are eaten by the animal in greater quantity or with more rapidity than they can be digested. The distention causes great pressure on the lungs and heart, impeding their action, and from that cause, a rupture of the rumen, producing death. Green clover, if the animals have an opportunity of gorging themselves with it when they are very hungry, is very likely to produce hoove, as it quickly ferments after being taken into the stomach. Any kind of vegetation, if wet with dew or rain, and especially if it be in a *frosty* condition, frequently occasions this difficulty. Turnips, potatoes, apples, or pumpkins, if eaten in large quantities, sometimes produce the same effects. Some animals seem constitutionally liable to hoove, probably from defective digestive organs. Choking, by some substance being fastened in the gullet, also produces the difficulty.

As to remedies, many of our farmers never use any—the animal is often left to itself—if it recovers, the owner is satisfied; if it dies, *he has the hide*. They who pretend to offer relief, sometimes give doses of beef-brine, lamp-oil, or soap-suds, but more frequently plunge a small knife into the paunch.

The writer has formerly had many animals affected with this complaint, and seldom failed to relieve them by administering alkalies; but care was always taken to give the medicine as soon as the necessity for it appeared. It was the general practice to give a large table-spoonful of pearl-ash or saleratus, dissolved warm water, to a full grown cow, and a quarter more to an ox. In some instances the sub-carbonate of soda was given instead of the above. These substances were given on the supposition that the distention of the stomach was caused by *carbonic acid gas*, which it was expected would be liberated by combination with the alkalies.

We have lately met with an excellent article by Thomas Sullivan, in the *Farmer's Magazine*, which gives a better understanding of the nature of hoove and its proper treatment, than we have before seen. He observes that a correct knowledge of the composition of the gas which occupies the stomach of hooven cattle will lead to the adoption of the speediest means for its liberation. He quotes from a French work the results of an analysis, by which it appears that the gas yielded—

Sulphuretted hydrogen,	80
Carburetted hydrogen,	15
Carbonic acid,	5
	100

Mr. S. observes, however, that accurate analyses indicate that the gas is differently combined at different stages of the complaint. In the earliest stages, it is chiefly carbonic acid; "but it is," he says, "speedily converted into carburetted hydrogen, (formed by the union of carbon with hydrogen,) and finally into sulphuretted hydrogen." He states that the liberation of the gas may be effected by different substances, according to the stage of the affection at the time they are given. He mentions three classes of remedies—stimulants, alkalies and chlorides. "The effect sought to be produced by the use of stimulants," says Mr. Sullivan, "is to cause the rumen to contract upon, and thereby, if possible, to expel its contents. Spirits of turpentine is the most commonly used, and probably the most efficacious of this class of medicines. A wine-glass full, or from two to three ounces, may be given in a bottle of water, and it will in most cases operate speedily in allaying the distention. Whiskey is sometimes administered in cases of hoove, and in general with beneficial effects when it can be introduced into the stomach." Alkalies are recommended in the incipient stages of the complaint, but in those only, as it is only at first that carbonic acid exists. He observes, however, that as "hydrogen very soon becomes the predominating constituent of the gas in the distended stomach," chlorides should be employed in preference to all other substances, and that they have, in fact, "generally superceded most of the recipes which were previously resorted to for curing hoove." The chloride of sodium, (common salt,) and the chloride of lime are the substances he prefers, which are not only effectual remedies but are easily obtained.

There are, however, some cases in which the use of medicines will produce no effect, from the great swelling of the stomach before the animal is discovered to be unwell; and in such cases the operation of *puncturing* must be resorted to in order to save the animal's life. But the use of the ordinary knife for this purpose is considered objectionable. Besides the gas, there is a quantity of liquid, mixed with the solid contents of the stomach, discharged through the wound, and Mr. S. observes, that, "although the greater portion of it may be ejected to be driven through the wound in the flank, yet some will necessarily fall into the abdominal cavity, where it soon operates injuriously by causing dangerous irritation, which occasionally terminates in fatal inflammatory disease. I would therefore urge upon every farmer and cattle-feeder, to procure and keep in readiness a small *trocar*, by means of which the operation of puncturing may be performed effectually and without the slightest risk." This instrument is in fact the same that is used by surgeons in tapping human subjects for dropsy. It is described as consisting of "two parts, the *stillet* and *canula*. The stillet is formed of a round rod of iron about five inches in length, terminating at one extremity in a triangular shaped point, and furnished with a wooden handle at the other. The canula is the name applied to the tube in which the rod is sheathed. In using the trocar, it is forced with a thrust into the paunch; and on withdrawing the stillet, the canula is left in the wound as long as may be found necessary, in order to permit the gas, &c. in the stomach to escape through the tube. The possibility of any danger from matter falling into the abdomen, is thus guarded against, and when the gas ceases to escape, which it will do in the course of a day or two after the paunch has been punctured, the canula is to be removed, after which the wound readily heals."

It is proper to remark that hoove from choking will generally be relieved by the removal of the obstruction in the gullet. The most ready mode of effecting this is to use a tarred rope, about an inch in diameter, or three inches in circumference, one end of which should be bound with tow and covered with soft leather. This passed down the gullet, will generally remove any obstruction, and the gas will escape. Liquids poured down the throat, to lubricate the parts, will sometimes enable the animal to swallow the substance, or it may become loosened so that they can throw it up. Warm castor oil, or soft soap, will be found the best articles for this purpose.

Preservation of Food.

An elaborate article on the perpetual preservation of food has lately appeared in the London *Westminster Review*. The writer considers at length the different modes adopted in various countries for the preservation of grain, meats, fruits, vegetables, &c.; and he comes to the conclusion that these processes for the most part, have been "little in advance of the squirrels and other animals;" that they are not as good as those of bees, for "they have an instinctive perception of the true principle, viz. *the exclusion of air*, which they accomplish by hermetically sealing up their honey-cells." He alludes to the preservation of articles of food in tin cases, from which the air is excluded. Meat and other provisions have been kept in this way for years; but he thinks the expense of these methods prevents their ever being more than a luxury.

He mentions a singular, but in many respects useful kind of *granary* adopted by the people of some parts of Spanish America. "The skin of an ox is taken off entire; the legs and neck being tied round, it is filled with tightly-jammed earth through a hole in the back, while suspended between posts. When dried to a state of parchment, the earth is taken out, and the bloated bag, resembling a huge hippopotamus, is filled with grain, which is thus kept air and vermin proof."

He recommends the construction of granaries on the principle of excluding the air, and observes:

"The practicalization of this is neither difficult nor costly: on the contrary, close granaries might be constructed at far less proportional cost than the existing kind. They might be made under ground as well as above ground, in many cases better. They might be constructed of cast iron, like gasometer tanks; or of brick and cement; or of brick and asphalte, like underground water-tanks. It is only required that they should be air-tight and consequently water-tight. A single man-hole at the top, similar to a steam boiler, is all the opening required, with an air-tight cover. The air-pump has long ceased to be a philosophic toy, and has taken its place in the arts as a manufacturer's tool; and no difficulty would exist as to that portion of the mechanism. Now, if we suppose a large cast-iron or brick cylinder sunk in the earth, the bottom being conical, and the top domed over, an air-pump adjusted for exhausting the air, and an Archimedean screw pump to discharge the grain, we have the whole apparatus complete. If we provide for *wet* grain, a water-pump may be added, as to a leaky ship. Suppose, now, a cargo of grain, partly germinating, and containing rats, mice, and weevils, to be shot into this reservoir, the cover put on and luted, and the air-pump at work, the germination would instantly cease, and the animal functions would be suspended. If it be objected that they would revive with the admission of the air, we answer, that the air need not be admitted, save to empty the reservoir. If it be contended that the reservoir may be leaky, we answer, so may a ship; and if so, the air-pump must be set to work just as is the case with a water pump in a leaky ship.

"The same arrangements that are good on land are good at sea. Many cargoes of wheat have been abandoned owing to heat and germination on their passage. Rats, mice, and weevils, also, are very destructive. If the vessel were built with metal-lined, air-tight compartments, the air might be exhausted by a pump; occasionally trying the pump to ensure against leakage; and thus even new, undried grain, might be carried and delivered across the sea undamaged. Collateral advantages would also be gained; the vessel would be more safe by means of air-tight compartments, and also more buoyant. And the same arrangements would be equally available for various kinds of goods, subject to damage in transit,—such as are hermetically sealed in tin cases; and thus the expense of packages would be saved.

"In reservoirs on shore the air might not merely be pumped *out*; warm air might be pumped *in*, to dry damp grain. Water might also be pumped in and out to *cleanse* the grain.

"Similar reservoirs or magazines on a similar scale might be constructed for butchers or other provision dealers, and meat might be preserved fresh for weeks in the heat of summer, preventing the necessity of waste, or of selling at ruinous low prices; and so with the fish brought to Billingsgate or other markets. On the same principle; there is no doubt, that fresh meat, as sea stock, might be carried instead of salt meat, and that fresh provisions might be transported from any part of the world to any other part. Pork, or beef, or mutton, or venison, might be killed in America and transported to England. Weevily biscuit would be a traditional commodity only, in the annals of sailor craft.

"As regards the economy of transport of grain from foreign countries, the process would be as follows. The corn brought down the Mississippi to New Orleans, or by canal or railroad to New York, would be discharged into the air-tight magazines of the vessel. On arriving at Liverpool, or Birkenhead, or Harwich, the Archimedean screw pump would discharge the grain into close waggons on a railway on the edge of the quay. These wagons might be rendered measurers of quantity, being all made to hold a given number of quarters; and thus all labor in expense and measuring would be saved. The wagons so loaded in bulk, and without the expense of sacks, would discharge their contents into reservoirs beneath the sidings; say for instance, the railway arches of the Eastern Counties. There it might remain secure against all detriment for any number of years the owner might desire, with the minimum of expense in transit and stowage. The wagons would be constructed with a hatch at top; and a discharge-pipe below."

Cut and pile wood before snow gets deep, and have it ready for hauling the first sledding.

How to raise Thirty Bushels of Wheat per acre

Where you could not raise twenty before.

Eds. Cultivator—Where you have a good clover sod, let the clover grow until the first week in June; then take a good team and plow, and turn the clover all under; then roll the sod down flat, and let it lay eight or ten days; then take a light harrow or cultivator, and pulverize the ground fine, and about the 25th of June sow 2¼ bushels of corn to the acre, and after harrowing it well, roll it down smooth. About the last week in August, take your roller and press the corn down as flat as possible, going round with the roller the same way you intend to plow the land; then plow the land as deep as possible, and turn all the corn under—follow with the roller, pressing all down flat. Thus you have two crops well mixed with the soil for manure.

Then take a light harrow or cultivator, and pulverize the ground fine, and sow your wheat about the middle of September, and if you do not have one-third more wheat than you do where you summer fallow, tell me I am mistaken in a cheap method of manuring land. The corn will grow so thick that it will keep every other plant down, and leave the ground clean, and if there is a few small leaves of the corn scratched up with the harrow, it will afford a good top dressing for the wheat. Ira Hopkins. *Auburn, Sept.* 22 1848.

Maryland Lands.

Eds. Cultivator—My communication respecting lands in Maryland, which appeared in the September No. of the *Cultivator*, has elicited numerous letters from your state and the eastern states; the writers making many inquiries respecting the lands, their condition, prices, &c.

Can you state in your October number, for the information of your northern readers, that this is the healthiest country in the world; remote from all large bodies of water, and all marshy lands, there are no epidemics whatever. There is a great abundance of fine spring water, many fine waterpowers unemployed, large bodies of fine chestnut and oak timber, and lime in every direction—that land, long thrown out, and easily brought into a fine state of fertility by the use of lime and plaster, can be purchased for ten dollars per acre—one-third down, the balance to remain for 5 to 8 years. Farms under cultivation, with tolerable buildings, may be bought for from fifteen to twenty dollars per acre, and improved farms within thirteen miles of the city of Baltimore, which is one of the best markets in the United States, and situated in the very midst of the limestone region, may be purchased for thirty dollars per acre, on equally accommodating terms. These farms contain from 150 to 300 acres.

It may be well here to remark that plenty of highly improved farms in this county would bring from eighty to one hundred dollars per acre.

I am 18 miles from Baltimore, and all around me are these vacant lands and farms which have been suffered to run down and which are in the market. I am within three miles of a good turnpike to Baltimore, and none of the above mentioned lands more than five miles from one or the other of the turnpikes to the city. I shall be happy to answer all letters (post paid,) which are addressed me on this subject.

Persons anxious of seeing the country, will on application to Mr. Thomas Street, Bull's Head tavern, North Front street, near Gay st., Baltimore, be directed how they may reach my farm by the returning market wagons, and I will show them the country in this vicinity with great pleasure. W. B. Hamilton. *Long Green, Baltimore Co., Md., Sept.* 23*d*, 1848.

Disease in Sheep.

In the October number, page 322, of the *Cultivator*, your correspondent seeks for information in relation to a disease that has proved very fatal among his sheep, and for which you also seek a remedy.

I will first endeavor to explain the functions of the parts involved in the disease, their location, and the indications of cure. The seat of the disease is in the mucous membrane, which is a continuation of the external skin, folded into all the orifices of the body, as the mouth, eyes, nose, ears, lungs, stomach, intestines and bladder; its structure of arterial capillaries, veins, arteries, nerves, &c., is similar to the external skin; its most extensive surfaces are those of the lungs and intestines, the former of which is supposed to be greater than the whole external surface of the body.

The healthy office of this membrane, is to furnish from the blood of a fluid called mucous, to lubricate its own surface and protect it from the action of materials taken into the system. The mucous membrane and the external surface of the body, seem to be a counterpart of each other, and perform nearly the same offices; hence if the action of one is suppressed, the other commences the performance of its office; thus a cold which closes the skin immediately stops the perspiration, which is now forced through the mucous membrane, producing the discharge of watery humors, pus intermixed with blood, dry cough, emaciation, &c., alluded to by Mr. Ferris. There are two varieties of this disease; the first is called *common catarrh*, which proceeds from cold taken in pasture that is not properly drained, also from atmospheric changes; it may also proceed from acrid or other irritating effluvia inhaled in the air, or from poisonous substances taken in the stomach in the form of food. The second variety and the one to which Mr. F. may ascribe the loss of his sheep, is called *Epidemic Influenza*, and is produced by general causes; the attack is sometimes sudden; although of nearly the same nature as the first form, it is more obstinate, and the treatment must be more energetic. It is very difficult to lay down correct rules for the treatment of this malady, under its different forms and stages; the principal object to be kept in view is to equalize the circulation, remove the irrritating causes from the organs affected, and restore the tone of the system.

For this purpose, we make use of the following articles: Take

1 oz. of Horehound,
1 " Marshmallow,
½ " powdered Elecampane,
½ " " Liquorice,
½ tea spoon full powdered Cayenne,
2 table spoons full Molasses,
2 " " Vinegar.

Mix, pour on the whole one quart of boiling water, set it aside for two hours, then strain through cotton cloth, and give a table spoon full night and morning.[*] If the bowels are constipated, a dose of linseed oil should precede the mixture; no water should be allowed during the treatment.

The following injection may be used night and morning: take,

1 oz. of powdered Bayberry bark,
½ " " Gum Arabic,
1 pint of boiling water.

Stir occasionally while cooling and strain as above.

The legs and ears should be briskly rubbed with tincture of capsicum; this latter acts as a counter irritant, equalizes the circulation, and entering into the system, gives tone and vigor to the whole animal economy. G. H. DADD, M. D. *Boston, Oct.* 9, 1848.

Kentucky Wild Lands.

Kentucky grazing lands are as good as any in the world. This is acknowledged by all who have any practical acquaintance with them. What can surpass the blue grass pastures of the regions around Maysville, Paris, Lexington, Frankfort and Louisville? Eastern men are prone to seek a grazing rather than a planting region as the field of their operations, and some are now turning their attention to the wild lands of Kentucky, as affording a better opportunity of investment than the prairies of the West. In Kentucky, wild lands adapted to grazing, can be purchased at from 50 cts. to $10 per acre—good lands, at an average of $2 per acre. Go up the Licking, towards Frankfort, or up the Ohio, and this can be done. And on a well selected location, the timber on the land for lumber purposes, is worth ten times the cost of the purchase money. Let an enterprising New England farmer, with a little capital to start upon, purchase a tract of land in the neighborhood of any great thoroughfare—as either of these rivers—and erect on the premises a good saw mill, to be operated by steam or water power, and the mill will make money rapidly for him, in preparing lumber for market—and there is always a good market at Cincinnati—while at at the same time it is clearing his land, for grazing. Thousands and thousands of acres of land are lying within 100 miles of Cincinnati, which, when cleared and in grass, will be worth from $10 to $20 per acre—and the lumber will pay for clearing the land, and leave a handsome profit besides. And why should not New England men take up these lands rather than go on to the prairies of the wide west? No healthier region of country exists in the known world. There are few or no slaves to be found there, and it is fully believed that Kentucky will be a free state on the gradual emancipation plan within five years—so that slavery will be no objection. There is the Marshall tract—25,000 acres, opposite and below Portsmouth—the Triplett tract, not far from Maysville, and other tracts where eligible purchases might be made. A simple ashery will pay all expense of clearing, provided no use is made of timber for lumber purposes. As a matter of illustration we might refer to the operations of the Kinniconick Railroad and Mill Company.

This company was chartered March 1, 1848, by the Kentucky Legislature, and went into immediate operation. The land had been previously purchased by three members of the present company, and stocked with choice sheep, with the view of raising wool and sheep for sale. The Company have built a railroad running back from Vanceburgh, Ky., about seven miles—into their timber tract, consisting of about 16,000 acres. At the extreme end of the road, and on the bank of the Kinniconick—a little river—they have built a mill 35 by 100 feet, to be worked by steam, capable of sawing 10,000 feet per day. The mill has three engines, one for driving a single saw, one for driving a gang of 18 saws, and one for driving any other machines the company may erect. All these engines are of high power. The saw-dust, together with a portion of the slabs, make all the steam required. The lumber when sawed at the mill is worth on the average, $10 per thousand, and will sell in market for $12.50 and upwards. Stave-dressing machines are to be connected with the mill, and circular saws for sawing a portion of the slabs into lath. The company have fenced in 2,000 acres of land in the neighborhood of the mill, from which they are now sawing the lumber—and many portions of this tract are worth $50 an acre for sawing purposes alone. The company now have about 500 acres cleared, and mostly set in grass. They have also on the premises about 1000 head of choice sheep, besides some cattle and horses. Wood from their land sells for $3.50 per cord by wholesale in Cincinnati market; and chestnut oak bark, of which they have vast quantities, at $10 pr cord. The lumber, the wood and the chestnut-oak bark are being prepared for market constantly. It is expected that from 4,000 to 5,000 cords of wood will be sold in the course of the coming year, and from 1,000 to 2,000 cords of bark, and about 250,000 ft. of lumber per month through the year. They will clear about 300 acres of land and seed in blue-grass, timothy and clover. They have made arrangements to raise 1,500 bushels of corn, 1,500 bushels of oats—1,000 bushels of potatoes, 2,500 of turneps, 100 of beans, &c.

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[*] This preparation undergoes a process of fermentation in the course of forty-eight hours, therefore should only be made in sufficient quantities for present use.

In addition, they have made and are making arrangements to have two ships built at their landing during the coming summer; also, to have fifty vine-dressers and their families from the Rhine, commence operations for the raising of grapes on their own account, during the coming spring, by furnishing them land for planting their vineyards. It is expected that these families will be followed by others in due course of time, having the same object in view. The members of the K. R. R. & Mill Company, are nearly all New England men, and if they accomplish one half they intend, it will be demonstrated that men need not go to the prairies to make good investments. B. *Oct.* 11, 1848.

Large Cattle.

The following are the weights and dimensions of the most remarkable of the fat cattle exhibited at the late State show at Buffalo.

J. and F. A. Alberger, of Buffalo, exhibited two oxen, called *Empire State* and *Queen City*. The former measured in girth, behind the fore legs, 9 feet 3 1-2 inches: and his length from shoulder to end of rump was 7 feet 3 inches; the latter measured in girth, 9 feet, and in length, 7 feet 7 inches. The aggregate weight of the two was 5,784 lbs.

Two oxen shown by Lyman Brainard, girthed, each, 8 feet 10 inches—length, 6 feet 7 inches—weight of the two, 4,800 lbs.

Two oxen shown by L. Doty, measured, in girth, 8 feet 6 inches, and 8 feet 3 inches; in length, 7 feet 7 inches, and 6 feet 3 inches—weight of the two, 4,670 lbs.

An ox shown by Edward Munson, girthed 9 feet—length, 7 feet 8 1-2 inches—weight, 3,100 lbs.

The following were the live weight of cattle four years old :

A pair shown by	E. Sheldon,	4,295 lbs.
" " "	B. Humphrey,	4,037 1-2
" " "	John Burns,	3,887 1-2
One ox " "	Heny Dixon,	2,200
" " "	E. Munson,	2,100

A pair of steers, three years old, shown by J. S. Wadsworth, weighed 3,390 lbs.; and a two-year-old steer, shown by the same gentleman, weighed 1,497 lbs.

A fat cow, 7 years old, shown by R. Hadfield, weighed 1,742 lbs.; and one 5 years old, shown by Robert Fowler, weighed 2,030 lbs. One 5 years old, shown by Allen Ayrault, weighed 1,652 lbs. One 6 years old, shown by Norman Kibbe, weighed 1,645. (This was only grass-fed. She was a cross of the Durham and Devon, and a very fine animal.)

R. I. Canfield, New Milford, Ct., exhibited a pair of cattle, 4 years old, at the late show at Litchfield, which weighed 4,600 lbs.

It may be interesting to compare these cattle with others of large size which have formerly attracted attention. The celebrated *Durham ox*, bred by Chas. Colling, in 1796, measured, at ten years old, as follows: girth, behind the shoulders, 10 feet; breadth, at the shoulders 2 feet 7 inches, across the hips 2 feet 7 inches. We have no means of ascertaining his live weight at that time; but he was slaughtered the following year, in consequence of an accident, and though he was thought to have lost considerably in weight, his four quarters weighed 2,322 lbs., his tallow 156 lbs., and his hide 142 lbs.—making a total dressed weight of 2,620 lbs.

The oxen, *Maximus* and *Magnus*, bred by Col. Chapin, Springfield, Mass., exhibited at the show of the Massachusetts Agricultural Society, in 1817,—(the cattle being six and a half years old)—measured as follows : *Maximus*, girth, 9 feet; breadth across the hips 2 feet 6 inches—across the shoulders 2 feet 7 1-2 inches. *Magnus*, girth, 9 feet; breadth across the hips, 2 feet 6 inches—across the shoulders, 2 feet 5 1-2 inches. We have never seen any account of the live weight of these cattle, and only know the dressed weight of the smaller one, which was 2000.

The famous Broughton heifer, *Peach*, bred by Sir Charles R. Tempest—which won the gold medal of the Smithfield Club, in 1843,—and a model of which may be seen at the office of the Cultivator,—was four years and 10 months old, and gave the following dressed weight: four quarters, 1,770 lbs., tallow, 228 lbs., hide, 120 lbs.—total, 2,118 lbs.

Propagation of Mushrooms.

The propagation of mushrooms has not received much attention in this country—the few that are here used for culinary purposes, being generally of spontaneous growth. The use of the vegetable is, however, increasing, and there is no reason why it may not become as common here as in European countries. It has been supposed by some that they were of no real value as food—that they are only suitable for forming condiments, sauces and ketchups; but chemical investigation has shown them to be rich in nitrogen—the basis of muscle, &c. The following extracts from an article in the Transactions of the Caledonian Horticultural Society, contain useful directions in regard to the propagation of mushrooms :

"Mushroom spawn (or the mycelium of the Agaricus campestris) may often be found on the floor of an empty out-house where horses had been kept for a length of time. It may be preserved in small masses in a dry place for future use.

There are various ways of increasing mushroom spawn, but the following is, perhaps, one of the most simple. In the month of July prepare a quantity of short-litter, mixed with horse droppings. Lay this heap in the corner of a shed, about two feet thick, beating it gently down. The heap will heat pretty strongly at first, but when the heat has subsided till about milk warm, insert pieces of spawn into the centre of the heap. If the heap get cold, and there be not enough of heat to cause the spawn to run, cover the heap with warm horse-dung, so as to diffuse a gentle heat through the whole mass. When the spawn has run through every part, have the whole taken into a dry loft, where it is to be kept until wanted.

"The material I make up a mushroom bed with, consists entirely of horse-droppings—preferring those of horses kept on oats and hay, which are far more productive than those of horses fed with grass and clover, or other soft food. The droppings are collected into a shed as they may be gathered from the stables, turning the mass out in the day time to dry a little, if weather permit. When we have collected enough to make a bed, I have it all taken into the mushroom-house, and if not dried enough, it is spread on the floor and on the tops of the flues, turning once or twice a day, until we consider it half dried. It is laid altogether in a heap to sweat the rank heat of it, turning it over three or four times a day to keep it from burning. When the heat has well subsided, which is generally in about five or six days, we begin to make up the bed, on a shelf, fitted, 2 feet 6 inches broad and 11 inches deep. This is filled within one inch of the top, beating the mass down in successive portions with a brick or mallet, as firm as possible, as the shelf is being filled. If it do not heat very vehemently, then all is going on well; but if it begin to burn, turn up with a dung-fork, to let the rank heat escape; when that has passed off, beat all down as before, and in a day or two the bed is ready for spawning.

"The heat in the bed when spawned, should not exceed 90° Fahrenheit, when the thermometer is sunk 5 inches into the bed. When of this heat insert pieces of spawn a little larger than a hen's egg, 9 inches apart, and just so deep as to be little more than covered. Lay on earth immediately, of a strong loomy character, 3 inches deep, and beat it all over firm with the back of a spade. In this state let the bed lie for eight or ten days, by which time the heat has declined a little.—Then cover it all over with hay, which increases the heat considerably; water it on the top of the hay with a syringe, two or three times a week, with water of the same temperature as the house, which is generally about 60° Fahrenheit. I never water directly on the surface of the bed, finding this, from experience, to have a very bad effect. In about five or six weeks at longest, the mushrooms make their appearance. I generally gather two pints a day from a bed 2 1-2 feet broad by 27 feet long. I have frequently, however, got as much as two pecks in one day when the bed was in full bearing; and on one occasion I had 2 1-2 quart bottles of ketchup made from a single gathering."

Rules for Plowing.

The Committee on Plowing at the late exhibition of the Onondaga county Agricultural Society, laid down the following rules. In regard to the first rule, we think the nature of the subsoil should be regarded in deciding on the depth of furrow—though six inches may be shallow enough for any soil. In some cases, where the subsoil is rich in the substances which constitute the food of plants, there is often great advantage in bringing the lower earth to the surface, where, by the action of air, heat, &c., it becomes a manure; but where the elements of fertility are to be *added* to the soil—that is, when the richness does not naturally exist, but is applied—we are in favor of less depth of furrow; though we would loosen and stir the earth as much as practicable with the subsoil plow.

"First, the ground should all be plowed and in no case *less* than six inches deep. The fertility of the soil will be greatly increased if the depth is gradually increased to twelve inches, and a greater depth is desirable.

"Secondly, the *furrow* should be well turned. And to do this the *width* of the furrow slice must always (except in the summer fallowing) be graduated to the *depth* of the furrow. If the furrow is too deep for the breadth cut, the slice will stand edgewise. If the slice is too wide for the depth of the furrow, a "balk" will be left on which nothing ought to be expected to grow, and if the next furrow is properly plowed, a hole will be left where the preceding furrow was improperly turned.

"Thirdly, where the surface of the ground will permit, the furrow should be *straight*, that the work may be more easily performed and have a more workmanlike appearance than it otherwise would have.

"Fourthly, where the earth is light and sandy, the flat furrow is best because it leaves the soil more compact, and less likely to be injured by drouth. If the soil is stiff and inclining to clay, the furrow is best if left at an angle of forty-five degrees, because the harrow will most effectually operate on the surface, and under each furrow a small channel will be left which will assist in disposing of the surplus water which may fall upon the surface, and also will render the soil more loose and friable."

To the above we add the following extract from the report of the Committee on plowing, at the late Pittsfield (Mass.) exhibition:

"Your Committe at this time beg to offer a few remarks on what remains to be done in the way of improvement. The work we have seen to-day approaches near to perfection, according to the general standard. The whole surface was thoroughly turned over, the depth and width well preserved. The only noticeable defects we have remarked on this and other occasions being that the dead furrow is not in all cases handsomely cleared up, and more care might be well bestowed in making the ends of the lands even. Although there may be some practical objections to the plan, it is worthy of consideration whether each plowman should not be required to stake a land and open the first furrow for himself, a requirement which would be a sure test of the skill of the workman and of the care with which his team was broken. According to the present plan, a superior plow may, and frequently does, make all the difference observable in the work of two men, while the skill may be on the losing side. It has been remarked that this plowing is nearly perfect, according to our standard. It remains to inquire in what respect our standard is imperfect. The answer is in the fact that if an average-plowed field here be compared with one in many foreign countries where the plows are greatly inferior in all respects to ours we shall find the comparison tells against us. The difference is less observable in sward plowing, which is necessarily the only species of plowing practiced at plowing-matches. In the art of plowing a given piece of sward *flat*, we may challenge competition. Whether flat furrows even in sward are the best is an open question. Without entering into the merits of the two systems it may not be out of place to mention that in consequence of some remarks in favor of this method by the Committee of last year, the subject was discussed by the North Stockbridge Farmer's Club, when it appeared that the nearly unanimous opinion was in favor of the shingling or lapped furrows. It is however, in the plowing of mellow land that we are most in fault, which arises on one side, from our pursuing the same system on the fallow that we do on the sward, of plowing wide and reversing flat, and on the other hand from the little care that is used in staking out the field in a scientific manner, and according to a well understood plan. It is to be regretted that neither of these subjects, fallow plowing, or the staking out of fields, which are at once a school and a test of good plowing, can come before the public at a ploughing-match; but a means might be devised whereby premiums should be offered for the best and most scientific fallow of five or ten acres, on the applicant's own farm, in the same way as we offer premiums for the best acre of corn or rye. It is believed that the best results might follow the adoption of such a plan."

Saving Pumpkins.

Every farmer who raises many pumpkins, usually loses a large portion, or else loses a large portion of their value, by freezing during sharp autumnul frosts. Some keep them into winter, and not having cellar room, throw them to the cows, when frozen about as hard as a brick-bat, and their ice-ribbed exterior resisting the sharpest teeth of a young brindle.

Gathering pumpkins and stacking corn-fodder are often performed on the same day; and if the farmer, when he builds his stack of stalks, will make a layer of pumpkins and then a layer of corn-fodder, they will be effectually protected from the frosts of winter, and if perfectly sound when gathered, will even keep into spring, if the stock is not consumed by that time.

Laboring Communities.

Hon. Harvey Baldwin, in his address before the Onondaga County Agricultural Society, made some good remarks in reference to the effects of industry, as compared with indolence, on the character and prosperity of communities. He came to the conclusion that as "a general principle, that community which is required to toil the most constantly, to economise the most closely and live most frugally, will be found to be physically, morally and intellectually in the best condition." He made some comparisons in illustration of the principle: "Look for example to the azure sky—the bland atmosphere—the temperate climate—the fertile soil of Italy, and there behold her people—as a nation—ignorant, trifling, licentious, depraved and beggarly poor, numbering more of the lazaroni, than perhaps any other nation on earth. Look to the Ocean Isles, and especially those that border our own Southern coast; warmed by a tropical sun and fanned by a perpetual summer's breeze, their fat and fertile soils yield almost without tillage or toil in the greatest luxuriance and profusion, everything necessary to the support and comfort of man; and yet as a whole, how miserable, degraded, licentious, ignorant and debased." On the other hand he refers to New England and the Northern States, "where from necessity the people are all obliged to live in the constant practice of all these virtues, and where on earth will you find a better people than they—it is their climate—their frugal habits, their constant and persevering industry that contributes largely to make them so."

The Florida Ever-Glades.

We have received from Hon. Mr. Wescott, member of the United States Senate from Florida, a copy of Congressional Document 242, containing a copy of the Bill reported by that gentlemen at the late session of Congress, "to authorize the draining of the Ever-Glades in the State of Florida, by said State, and to grant the same to said State for that purpose." The Document contains a great amount of interesting information relating to this subject. It seems that the tract which it is proposed to reclaim, comprises, by estimation about one million of acres—the cost of reclamation is estimated at half a million of dollars—and it is thought that the tract would be capable of supporting a population of 250,000. At the present time these Ever-Glades are nearly worthless. The tract is mostly covered with water-grasses, growing from six to ten feet high, and the soil is more or less covered with water all the year. The basis is said to be lime-stone, upon which a deep vegetable deposite has accumulated from the decay of the plants produced for ages. The general surface of the soil being 12 or 15 feet above the level of the sea, it is proposed to drain it by cutting canals through various portions,—they emptying into tide creeks or rivers, which it is said extend up into the Ever-Glades. When this body of land is made suitable for cultivation, it is proposed to introduce the various tropical plants, valuable in commerce. The tract is situated to the southward of 27° 30′, where there is no frost, and where many productions may be obtained that will not grow in other parts of the United States. The following schedule is given of the articles which it is proposed to introduce:

Compty, yam, casava, ginger, pulka, Sisal hemp, indigo, tobacco, cortex cascarilla, canilla alba, sarsaparilla, sugar cane, pepper, bush and vine pepper, pimento, tea plant, orange, guava, Otaheite plum, shaddock, lime, hog plum, forbidden fruit, lemon. Jamaica apple, grape fruit, citron, sugar apple, banana, pineapple, cocoanut, plantain, sapadilla, sour sop, Avocato pear, mango, mame, olive, mame sapota, boxwood, lignumvitæ, mahogany, titi, and ship timber.

If the scheme proposed by Mr. Wescott and his associates, can be carried out—and there is certainly much evidence of its feasibility—it seems to us that the results could not fail to be vastly beneficial to the country.

Pork Making.

By the way of improvement in agriculture in all its various branches, such as tilling the soil, and improving stock of all kinds, Shelburne, in Franklin county, (Mass.,) I think is not excelled by any town in the state. In raising pork and pigs, they are a little the tallest yet. One hog raised and fattened last winter, by Mr. O. O. Bordwell, (a subscriber of yours,) slaughtered when just eighteen months old, weighed when dressed 735 lbs., neat weight. A litter of pigs, five in number, raised by Charles Smith, farrowed the 10th day of August, 1848, weighed, when just 5½ weeks old, No. 1, 30 lbs.—No. 2, 29¾ lbs.—No. 3, 29¼ lbs.—No. 4, 28½ lbs.—No. 5, 27½ lbs.; making the whole, 144 lbs. For symmetry of form, and fineness of bone, they are not excelled by any thing of their kind. The sow was just one year old, fed only with milk and slop from the kitchen, up to time of weaning her pigs; she is of fine form; weight judged to be 400 lbs, live weight. Charles Smith. *Shelburne, Mass., Sept.* 25, 1848.

Principles of Plowing.—The editor of the *Canadian Cultivator*, who attended the State Fair at Buffalo, spoke in contemptuous terms of the "yankee plows" as compared with those made after the Scotch pattern. The *Maine Farmer*, in an article suggested by the remarks in the first-mentioned journal, gives the following sensible observations on the principles of plowing:—"Setting aside the mooted question, which is best, a furrow laid over complelely flat, or set up on its edge—we shall limit the principles of turning, sward land for instance, to two. The first principle is this: The furrow slice, from the point of the plow to the heel of the mould-board, is, in form, the thread of a screw; or, perhaps it would better illustrate it, to compare it to the web of a screw auger, with a long twist. Take an elastic saw plate, fasten one end to the table, and turn it so that at the other end the under side is uppermost, and you represent the furrow in all its positions, from the first lifting from its bed—its progress or transition over—and its position when over. The mould-board, or whole plow should be of the shape that will cut a slice of ground, of given width and depth, and place it in that position, with the least friction or resistance, and of course with the least expenditure of force. As the plow is in progressive motion during the turning of this slice of earth, it will be found that there is a proper medium of length suitable, to accomplish this. If it be too short and too curved, it will break the slice, and push it over unsteadily, like the crowding of a blunt wedge through the soil. If it be of just the right length, it will lift the slice easily, and gradually,—turn it gently and completely, and leave it perfectly reversed in position. If too long, it renders the implement cumbrous and prolongs the friction to a useless degree.

"The other principle is: To have the beam of such a length and in such a position as to enable the power, or draft, to be applied equally, nearest the point of greatest resistance, and to have the handles of such length and slope as to enable the plowman to guide, turn and handle it, while in operation, with the least expense of force and time."

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

Communications received since our last, from Alfred Coffin, Ira Hopkins, W. I. I., Charles Smith, W. B. Hamilton, A Young Farmer, G. H. Dadd, B., J., N. Longworth.

Books, Pamphlets, &c., have been received, during the past month, as follows:—Catalogue of the Lake Erie Nurseries, Cleveland, Ohio, Elliott & Co., proprietors—Catalogue of Seneca Lake Highland Nurseries, Catharine, N. Y., E. C. Frost, proprietor—Patent Office Report, from Hon. J. D. Wescott, Jr., U. S. Senate—Catalogue of the Highland Nurseries, Newburgh, A. Saul & Co., proprietors, (late A. J. Downing & Co.)

Old Cheese.—We have received from Mr. J. Cary, a sample of cheese *nine* years old. It is of excellent quality, though we cannot say whether it has constantly improved, or was actually improving with age. If it had not yet reached all attainable perfection, we should like to know how much time would be required for that object.

Fine Saxon Sheep.—We had lately the opportunity of seeing the flock of Saxon sheep owned by Mr. Chas. B. Smith, of Woolcottville, Litchfield county, Ct. This flock has been widely known for several years, and we had occasionally seen specimens from it which were of superior quality. Mr. S. has a smaller number than usual, having sold many. He has now about 200. His breeding ewes are a very superior lot—healthy, well-shaped, and of beautiful fineness and evenness of fleece. They are also very uniform in their appearance and quality, showing that the breeder is accomplishing his object. The average weight of fleece, washed in the way formerly practiced has been 2¾ to 3 pounds per head; but since Mr. S. has adopted the plan of more thorough cleansing, the average has been reduced to 2½ and 2¾ lbs. Mr. Smith has on several occasions imported sheep from Germany, and has lately sent out an order for twenty, which he expects will soon arrive in this country.

Importation of Woolen Goods.—Some of our readers are probably aware that great quantities of European woolen goods have latterly been thrown into our markets. A correspondent who appears to be familiar with the subject, informs us that the French and Belgian governments are allowing bounties of 12 to 14 per cent. on the exportation of such cloths. The duties at our custom houses are charged at the short price. The case is thus illustrated:—"An article is bought of a French manufacturer at $100; on shipment at Havre a bounty of $12 is allowed, which reduces the article to $88; the duty in this country, 30 per cent. is $26.40, bringing the article into our markets at $114. 40, whereas it should be $130."

It is remarked that every yard of foreign broadcloth occupies the space of one fleece of American wool, and that under the complete surfeit of goods imported under the above system, the low price of wool here, and the general stagnation of the trade, is unavoidable. We would suggest the inquiry whether this state of things was contemplated when the tariff of 1846 was framed?

Milking Cows.—It is important that all the milk should be drawn from the udder; if it be not, the quantity secreted will diminish in proportion to the quantity left at each milking. That which is left in the udder is re-absorbed into the system, and the next milking will be so much less in quantity. Cows will not yield their milk to a person they dislike; but will show by their quiet attitude and chewing the cud that the operation, when performed by a gentle and expert milker, is productive of pleasure. The udder and teats should always be washed clean with water, which in the winter should be warmed. This will not only insure the cleanliness of the milk, but will cause it to flow more freely.

Woolen Rags for Manure.—The waste of woolen factories, and woolen rags, make a valuable manure. They may be made up into compost and remain till rotted, or may be used by themselves. A correspondent of the *Ag. Gazette* gives his mode of using the rags. He runs them through a straw-cutter, and then spreads them on grass-land. On some adjoining land he had applied lime, and also bone-dust, at a greater cost than the rags, but the latter produced the greatest results. He has tried mixing them with lime, but finds they are not so good "as the lime kills the greasy matter, and injures their fertilizing qualities." Perhaps ashes, or potash, by forming a soluble soap, would do better.

Early-sown Rye may be fed with sheep or calves, during the month of November, with great benefit to the stock, and, if the growth is large, with decided benefit to the crop, as a large quantity of herbage, lying on the ground in the winter, renders the crop liable to be "smothered," as it is called, especially if it is covered long with snow. No injury results from feeding rye with sheep or light cattle, any time in winter, except when the ground is so soft that it would be "poached," and the roots of the rye be broken; and there is no food better for such animals. We have often seen a young calf or lamb so improved by grazing on rye, late in the fall and early in winter, that they not only held their own when returned with the rest, but took the lead in thrift and growth. Rye is frequently sown for the purpose of being fed by stock, in the southern part of Ohio and in Kentucky. It is also the best crop for early *soiling*. It starts early, and may be cut several times before any other article is far enough advanced for the purpose.

Premium on Straw Cutters.—The premium awarded for best straw cutter at the fair at Buffalo to Rapalje & Briggs, of Rochester, was for a straw cutter manufactured by Ruggles, Nourse & Mason, of Worcester, Mass.—entered by Messrs. Rapalje & Briggs. B. P. Johnson, Secretary.

Agricultural Rooms, Albany, Oct. 17, 1848.

Nipping off the tops of potatoes.—A few months since, Dr. Klotch recommended nipping off the tops of potatoes, while growing, in order to prevent the attack of the disease. A foreign paper gives the result of an experiment to test this, from which it appears that of two parallel rows, equal in extent, one having the tops nipped off as recommended, and the other left untouched, the latter gave 27 pounds more of sound potatoes than the former.

Fattening cattle with mixed food.—A Scotchman who fattens 150 head of Galloway cattle, annually, finds it most economical to feed with bruised flax-seed, boiled with meal of barley, oats, or Indian corn, at the rate of one part flax seed to three parts meal, by weight,—the cooked compound to be afterwards mixed with oat straw or hay. From four to twelve pounds of the compound are given to each beast per day.—Would it not be well for some of our farmers who stall-feed cattle, to try this or a similar mode? We are by no means certain that ordinary food would pay the expense of cooking; but flax-seed is known to be highly nutritious, and the cooking would not only facilitate its digestion, but it would serve by mixing to render the other food palatable, and by promoting the appetite and health of the animal, would be likely to hasten its thrift.

Flour from sprouted grain.—A correspondent at Granville, Ohio, states that the wheat in that neighborhood was injured last year, by wet weather, and wishes to know what would be the best mode of making bread from the flour of wheat that had been damaged in that way. Will some one answer?

Agricultural Guide and Almanac for 1849.—Edited by M. M. Rodgers, M. D., and published by Shepard & Reed, Rochester, N. Y. It is a manual containing much useful information.

Answers to Inquiries.

Fattening Swine.—"Young Farmer"—If your corn is *hard*, it will do the animals more good if ground than if fed whole. As to feeding the meal wet or dry, there is probably no difference, unless it is to be cooked. We do not suppose that it "*adds* to its nutriment to cook it"—but we think the cooking brings the food into a condition in which the nutriment is easier and more thoroughly extracted. The "proportionate" gain by cooking must depend on circumstances, such as the hardness of the grain, and the quantity fed to the animal daily. A hog in good health will extract the nutriment from a small quantity of corn or raw meal, daily, but if full fed he is unable to do it, and the food is only partially digested. The cooking assists digestion, and in some instances will make a difference of half the nutriment the food contained—that is, by cooking, the animal obtains the whole, whereas if the corn was fed whole and raw, only half the nutriment might be extracted.

Grapes from Seed.—J. W.—The *Boston Cultivator* gives the following as the best mode of raising grapes from seed. The writer says he has about 500 plants raised from 20 different kinds of grapes. "Save the seeds when the grapes are ripe; mark them, as it is desirable to trace the pedigree of a new fruit. Late in the fall, sow them in a rather light mellow soil, likea good garden, covering them about two-thirds of an inch deep. If sowing be delayed till spring, put the seeds into loam in the fall, or early in winter, and bury in earth, or place in the cellar, and keep gently moist which is best done by putting them in a tight stone or earthen vessel, covering the earth with damp moss or cloth, and placing in a close box or chest. It is less trouble to sow in the fall, especially where one has various kinds."

Churning Milk.—G. C. M., Greenfield, Mass.—We have no doubt that good butter is made by churning the milk, but we do not think it is the only way by which butter can be made that will stand tropical climates or long voyages. The Dutch and Irish butter has been celebrated for long-keeping, and that is generally made from cream, skimmed from the milk. We are not aware that there is anything peculiar in the process of churning milk. Large churns are required, and they are often worked by horse power. It is common to let the milk curdle or "lobber" a little before it is churned. O. C. Crocker, of Union, Broome county, N. Y., and John Holbert, of Chemung, Chemung county, are both noted for the fine quality of their butter, made in this way, and they would probably give any information in regard to their mode of manufacture.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Oct. 20, 1848.

FLOUR—Genesee per bbl. $5.37½a$5.56½. Demand fair and market steady.

GRAIN.—Wheat, Genesee, per bu., $1.25—Ohio, $1.15—Corn, in moderate request at 72a73 cts. per bushel for round, and 67a68 for mixed.

BUTTER—Orange Co, per lb., 19c.—Western, dairy, 15a17c.

CHEESE—per lb., 6½a7c. In good demand.

BEEF—Mess, per bbl, $11—Prime, $6.

PORK—Mess, per bbl., $12.25—Prime, $10—dull.

LARD—in kegs, per lb., 7½a8c.

HAMS—Smoked, per lb., 6½a9c.

HOPS—First sort, growth of 1848, per lb., 9a11c.

TOBACCO— per lb., Virginia and Kentucky, 2½a6½c.

COTTON—Upland and Florida, per lb., 5¾a7½c.—New Orleans and Alabama, 5a8½c.

WOOL—Prime or Saxon fleeces, washed, per lb...	35a40 cts.
American full blood fleeces,..............	31a33 "
" half blood,....................	26a27 "
" one-fourth blood and common,.	23a25 "

FOR SALE AT WHOLESALE AND RETAIL,

AT the Albany Agricultural Warehouse and Seed Store, Nos. 10 and 12 Green st., Albany, by H. L. EMERY, the following machines:

Clinton's Improved Corn Sheller.

Warranted the best hand machine for the purpose in use.

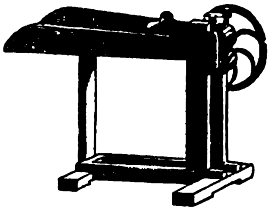
They are furnished with one or two hoppers, and are capable of shelling, with one hopper and two men, from 150 to 200 bushels ears per day; with the double hopper and three men, nearly double that amount may be done.

Price of best make, $10 & $13; ordinary quality, $7 & $9 each. The trade furnished on reasonable terms. The State Agricultural Society awarded to this Sheller their first premium in 1847.

Adams' Patent Wood Well and Cistern Pump.

A simple wood barrel and lead connection, for wells or cisterns, a neat and durable article, and a perfectly safe and tight connection, and warranted to give satisfaction, or may be returned within six months, at my expense, and purchage money, and expense of setting, refunded. Rights of Counties and Towns for sale by applying to H. L. EMERY.

Pumps furnished to the trade at unprecedented low prices. Retail price, $5.

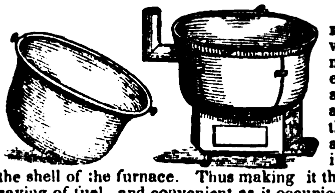


A large supply of Stevens' Spiral Hay Cutters, of all sizes, at wholesale and retail, at manufacturer's prices. Also a good assortment of Hovey's, Rich's, Tower's and Ruggles, Nourse and Mason's Cutters of all sizes, at manufacturer's prices.

When feeders of stock learn the advantages of using cut feed, saying nothing of the great saving by using up much of the coarser qualities of hay, corn stalks' &c., they will no longer be without a good hay or corn stalk cutter.

Wheeler's Horse Powers and Threshing Machines.

HAVING sold upwards of two hundred setts of the above celebrated Machines, and with unparalleled success, not having failed to give entire satisfaction in every instance, we call the attention of farmers again to it. They are subject to the following warranty, viz: "The purchaser himself being judge—may return them at my expense within three months, if not found fully to answer the description and purpose as stated in Catalogue, (which is furnished gratis at store or by mail,) and the purchase money refunded."



Mott's Agricultural Furnaces. A convenient and portable furnace and boiler connected, and so constructed as to admit the flame and heat on all sides of the boiler, there being a space of two to three inches between it and the shell of the furnace. Thus making it the most economical by saving of fuel, and convenient as it occupies but little space, and with funnel, may be readily connected with any chimney.

Prices,	10 gallons,	$7 50	45	gallons,	$20 00
	15 "	9 00	60	"	23 00
	22 "	12 00	90	"	35 00
	30 "	15 00	100	"	50 00

MOBILE SEED STORE.

AGRICULTURAL and Horticultural Manufacturers' Agents, for the sale of

Plows, Straw Cutters, Corn Shellers, Harrows, Cultivators, Seed Planters, Water Rams, &c., &c.

The undersigned have been for many years devoted to the advancement of *Agricultural, Horticultural*, and other scientific pursuits, for which a taste is advancing in this State rapidly, and beyond any other period of its existence; and aware of the want of an Agent located in Mobile, in whose judgment in such matters, the citizens of this and the adjoining State, and the proprietors can have confidence, and who would take a direct and personal interest in furthering the introduction of approved *Agricultural* and *Horticultural* implements, tools and machinery, we are induced to open an Agency in this city, devoted to these branches alone. From our knowledge of, and acquaintance with the *Planters of Alabama* and *Mississippi*, we are enabled to offer greater inducements and facilities to *Patentees* and *Inventors* for the sale of their articles, than can be obtained elsewhere. We will open an exclusive

AGRICULTURAL AGENCY WAREHOUSE IN MOBILE,
SUITED TO THE SOUTHERN PLANTER.

Inventors and Patentees are invited to a correspondence (post paid) relating to Plows, Harrows, Rollers, Cultivators, Horse Powers, Grain and Rice Thrashers, Hulling Machines, Fanning Mills, Cotton Gins, and all other articles useful to Planters and Agriculturists.

It may be proper to add that the great Mobile and Ohio Railroad, of which Mobile will be the depot, will go on to a rapid and certain completion, and that this will shortly be a point interior to none in the Union, for the sale of every thing connected with the vast interest of Agriculture in Alabama, Mississippi, Tennessee and Kentucky, and through the terminus of the Road at the mouth of the Ohio, with the "*Great West*," whose outlet this will be in a fair profitable rivalry with New Orleans.

We will make prompt returns of all business confided to us.

☞ Agricultrual Works received on commission

Mobile, Sept, 1848. S B. NORTH & CO.

Refer to:—Hon. John Gayle, Member of Congress; Messrs. Stewart & Eaton, Esqs.; J. G. Lyon, Esq., U. S. Marshal; Messrs. LeBaron & Son; J. C. Hodges, Esq.; Collier H. Minge, Esq.; Messrs. L. Merchant & Co., J. H. Rivers & Co, Robert Desha & Co., David Stodder, Esq; Luther Tucker, Esq., publisher "Cultivator" and "Horticulturist," Albany; Wm. H. Starr, Esq., Editor "Farmer & Mechanic," New-York; A. B. Allen, Esq., Editor "American Agriculturist," New-York.

Nov. 1.—3t. eom.

Premium

GRAND ACTION PIANO FORTES,

With the Dolce Campana Attachment,

WITH or without the Metallic Frame, and containing every real improvement. Warranted in all cases to prove satisfactory, or purchase money promptly refunded, together with all expenses.

THE DOLCE CAMPANA ATTACHMENT is a new invention, for which the subscribers have secured letters patent—an improvement which combines more richness and beauty of tone than ever before attained in the Piano Forte. This instrument has always been regarded as of limited power, prior to those improvements by way of attachments, which are but recent inventions. the soft or harp pedal has been the principal one to vary the tone—but always objectionable by its marring the clearness of the vibrations of the strings, and to overcome which has been the great desideratum with the inventors of the

DOLCE CAMPANA ATTACHMENT,

And by which this great object is fully attained. It is controlled by a pedal, and produces similar qualities and expressions of tone unlike any thing heretofore known; and when combined with the other two pedals, produces the lightest shade of Altissimo notes, alternating with the crescendo and diminuendo, and other musical accents of any kind which may be desired, in perfect imitation of an orchestra performance. The particular qualities of this new attachment, are its clearness, brilliancy, and delicacy of tone, which falls upon the ear with a surpassing softness, like the chiming peals of distant bells,

> "As they roll their notes along,
> By brae and breezy burn;"

and hence its peculiar name, "Dolce Campana," sweet bells. This attachment is perfectly simple, and so constructed that it can be detached from the instrument in a few moments. It will not put the piano out of tune, or in any way effect it, except at the will of the performer. One of our Piano Fortes, with this Attachment. received the PREMIUM at the late great State Fair at Buffalo.

Those wishing to purchase a Piano Forte will do well to call and hear this new invention before they buy. A large assortment of Piano Fortes at various prices, 6 and 7 octaves, with Music and Musical Instruments constantly on hand.

BOARDMAN & GRAY,
Nov. 1.—1t.* Nos. 4 and 6 North Pearl, and 79 State-st., Albany.

CIDER MILL SCREWS.

THE Subscribers are prepared to supply orders for Cast Iron Cider Mill Screws and boxes complete.

Also, Steam Engines, Mill Gearing, and Castings in general.

JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver Street, Albany.
October 1, 1848—2t.

SAXON SHEEP.

HAVING sold a portion of our farm, we shall reduce our flock, and now offer to sell, giving a selection from our entire stock of breeding Ewes and Bucks. We refer to

H. Blanchard, Esq., *Kinderhook Wool Depot.*
Samuel Lawrence, Esq., *Lowell*; and
The Editors of the *Cultivator*.

Letters addressed to us, New Lebanon, Columbia county, N. Y., will meet with prompt attention.

Nov. 1, 1848.—2t.* M. Y. & H A. TILDEN.

WM. R. PRINCE & CO.,

PROPRIETORS of the Linnæan Garden and Nurseries, Flushing, offer their unrivalled stock of Fruit Trees of suitable size for Orchards, and 20,000 Pears, of bearing age, on the Pear and Quince.

APPLES, 320 varieties, among which are,

Early Strawberry, Early Harvest, Summer Rose,
Summer Queen, Large Early Bough, Benoni,
Maiden's Blush, Keswick Codlin, Drap d'or,
Fameuse, Porter, Gravenstein, Yellow Bellflower,
Northern Spy, Baldwin, Peck's Pleasant,
Hubbardston Nonsuch, Swaar, Fall Harvey,
Ladies Sweeting, Tower of Glammis,
Herefordshire Pearmain, Fall Pippin,
Rhode Island Greening, White Seeknofurther,
American Summer Pearmain, Esopus Spitzenburg,
Green and Yellow Newtown Pippins,
Golden Russet, &c.

PEARS, 508 varieties, comprising,

Dearborn's Seedling, Madeleine, Bartlet,
Bloodgood, Summer Francreal, Tyson, Seckel,
Beurre d'Amalis, Flemish Beauty,
Louise Bonne of Jersey, Duchesse d'Angouleme,
Glout Morceau, Beurre Bosc, Beurre d'Aremberg,
Winter Nelis, Lawrence, Columbia,
Easter Beurre, Fondante d'automne,
Vicar of Winkfield, &c.

PLUMS, 170 varieties, comprising,

Imperial Gage, Washington, Purple Favorite,
Yellow Gage, Coe's Golden Drop, Smith's Orleans,
Bleecker's Gage, Duane's Purple,
Lucombe's Nonsuch, Purple Gage;
Ickworth Imperatrice, &c.

CHERRIES, 120 varieties, comprising,

Black Tartarian, Graffion or Bigarreau,
Black Eagle, Elton, Mayduke, Downer's late red,
Belle de Choisy, Knight's Early Black,
Downton, White Bigarreau, American Amber,
Napoleon, &c.

PEACHES, 180 varieties, comprising,

Large Early York, Crawford's Early,
Crawford's Late, White Rareripe, Nivette,
Bergen's Yellow, Grosse Mignonne,
Oldmixon Free, Red Rareripe,
Cooledge's Favorite, Heath Cling,
Serrate Early York, White Imperial,
Early vnd Late Admirable, Oldmixon Cling,
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APRICOTS, 34 varieties, comprising,

Moorpark, Large Early, Boston, Violet Hative,
New White, Red Roman, Lafayette,
Hardwicke Seedling, Dubois Golden, Early Pecch,
Breda, &c.

NECTARINES, 28 varieties, comprising,

Elruge, Boston, Red Roman, Violet Hative,
New White, Hardwicke Seedling, Pitmaston,
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Also, Almonds, Quinces, Grapes, Figs, Pomegranates,
Walnuts, Gooseberries, Raspberries, Currants,
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ORNAMEETAL TREES AND SHRUBBERY, including, 30,000 Evergreen Trees, and Roses of 1,600 splendid varieties, Bulbous Flower Roots, Pœonies, Carnations, Hedge Plants, Vines, Creepers, &c.

Orders per mail will be executed with dispatch, and forwarded as desired. Nov. 1—1t.

VALUABLE BOOKS

For sale at the Office of the Cultivator:

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"THE CULTIVATOR" AND "THE HORTICULTURIST."

INSTRUCTIONS TO AGENTS.

THE CULTIVATOR—Price $1 a year. To Agents, seven copies for $5.—Fifteen copies for $10. All subscriptions to begin with the volume, which commences with the January No. in each year.

THE HORTICULTURIST—Price $3 a year. Agents are allowed a discount of 20 per cent on all subscriptions they forward. Subscribers to the Horticulturist may commence with the volume in July, or with the half volume, in January.

☞ All orders to come free of postage, and to be accompanied with the money for the numbers ordered.

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Bangor, C. K Miller
Calais, L L Lowell
Dover, Jos. Dow
Dennysville, I. McGlauflin
Edgecomb, Hon J. Pool
Foxcroft, C. Chamberlain
Fryburgh, J. O. McMillan
Guilford, J E. Loring
Howland, Rev. E. McGregor
Hallowell, Hon. John Otis
Livermore Falls, J. Wadsworth
Milo, A. Jones
Machias, W. Hill
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Norridgewock, Dr. I. S. Lynde
Portland, E. C. Andrews
Parkman, S. P. Shaw
Plymouth, Hon. S. Butman
Sangerville, C. S. Hussey
Skowhegan, A. Coburn
Sweden, W H. Powers
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South Orrington, W. Goodale
Sydney, Chas. W. Coffin
Vassalboro, C. & S. N. Taber
Wilton, Chas. M. Morse
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Hanover, S B. Douglass
Hanover Centre, J. Smith, P.M.
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Meriden, Benj. Wingate
Northwood, D Tucker
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Portsmouth, Supply Ham, S. A. Badger
Plymouth, T. Eastman
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Salisbury, I. N. Sawyer
South Deerfield, Maj. C. Tucker
Walpole, C. Babbitt

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Bethel, J Smith, P. M,
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Brandon, Ed. Jackson
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Rouses Point, Jno. Bratt
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Rensselaerville, R. L. Mulford
Richville, C. White
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Rockville, Dr. Munson
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Rock Stream, Peter McKey
Royalton, Jos. Chapin
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Russia, Thomas Johnson
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Trenton Falls, M. Moore
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Utica, Wm. Bristol
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Union Mills, F. Veeder
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Valatie, M. L. Prentiss
Vernon, Jas. Turner
Verbank, C. Coffin
Vernon Centre, E. M. Foot
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Volney, E. Griffin
Verona, Geo. T. Peckham
Voorheesville, S. Ostrom
Wilton, Cyrus Perry
Watertown, E. S. Massey
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Washington Hollow, Wm. K. Coffin
Wappinger's Creek, J. Ingham
Warwick, Jno. R. Wilson
Westport, R. Stevenson
Waterford, D. B. King
White Plains, Jno. R. Sherwood
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West Point, Rich. D. Arden
West Galway, Geo Ainslee
White Store, N. N. Greene
White Creek, S. Barker
Westville, Geo. D. Gane
Watervliet Centre, H. Terry
Windfall, C. M. Brown
West Winfield, M. B. Foster
Warren, H. Taylor
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West Stockholm, G. A. Hanchet
Yaphank, H. J. Weeks
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Youngstown, Peter Tower

GUANO.

A Superior lot of Patagonian Guano just landing—put up in tight casks, thus preserving all the ammonia—for sale at two cents per lb., at the Agricultural Warehouse of S. C. HILLS & CO. 43 Fulton St., New-York. Oct. 1, 1848—3t.

LARGE STOVES.

THE Subscribers are making the largest and best Stoves in market for Dairymen, Planters, and Hotel keepers—to which their attention is invited. JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver st., Albany.
Oct. 1, 1848—3t.

SOUTH DOWN SHEEP.

THE Subscriber offers for sale, several very superior Southdown Rams and Ewes, (from lambs to 4 years old,) some of which are imported animals.

Great care has been taken, and no expense spared to raise up this stock to a high standard. He has lately added to his former stock, several fine animals, many of which were selected personally by their former owner, from some of the most noted flocks in England.

Applications may be made either personally, or by letter, addressed to J. McD. McINTYRE, Albany.
Oct. 1.—3t.

PLUM STOCKS.

THE subscriber offers for sale 100,000 good strong seedling Plum Stocks.

Messrs. King and Ripley, and other nurserymen who have used these plum stocks, prefer them to the imported or any other sort ever tried by them.

None less than 15 inches high will be put in.

Price $10 per 1,000—$90 for 10,000, delivered in New-York.

Also, a large collection of Fruit and Ornamental Trees, Grape Vines, &c. Apply to SAMUEL I. GUSTIN, Newark, N. J.
Oct. 1—2t.

TO NURSERYMEN, GARDENERS AND HORTICULTURISTS GENERALLY.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes by a faithful attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References—A. J. Downing, Esq. and A. Saul & Co., Newburgh; H. Reid, Murry Hill, N. Y., and Elizabethtown, N. J.

GEO. G. SHEPPARD,
143 Maiden Lane, New York.

N. B. Orders for Russia Mats, for Budding or Packing, immediately supplied.
New-York, Oct. 1, 1848.—2t.

NEWBURGH NURSERY—FRUIT TREES.

THIS Nursery contains a general assortment of fine thrifty trees, consisting of

Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Raspberries, Gooseberries, Strawberries, &c.,

Of the most approved kinds. Also many that are new and rare, of recent introduction.

All orders (post-paid,) will be carefully attended to by the proprietor—Catalogues sent on application.

CHA'S. DOWNING.
Newburgh, Orange County, N. Y., Oct. 1, 1848.—2t.

FRUIT TREES.

THE Subscribers are now ready to receive orders for superior TREES viz: APPLES, PLUMS, PEARS, CHERRIES, PEACHES, &c, from their new nursery. Trees all warranted in a healthy condition, and true to their sorts. Orders are entered on the order book, to be forwarded as soon as practicable in the fall. Orders respectfully solicited, and will receive prompt attention.

WILSON, THORBURN & TELLER.

☞ Also, a fine assortment of choice varieties of the Pear on Quince stocks, or dwarf pear trees.
Albany, Oct 1, 1848—2t.

TO NURSERYMEN, ORCHARDISTS, AND PLANTERS.

THE subscriber offers for sale at his nurseries, Plymouth, Mass. Pear, Quince, Cherry, Plum, Apple, and Dwarf Apple, (Paradise) stocks, suitable for budding next August, or for Spring grafting. Also, the following ornamental tree stocks, from two to three feet high and stout: viz. Mountain Ash, Oak, Hawthorn, Elm, Spanish Chestnut, Horse Chestnut, Birch, Beech, Ash, Norway Maple, Sweet Brier, Larch, Scotch fir. (2 ft) Silver fir, (1ft.) Spruce fir, (1 ft.) Norway fir, (1 ft) Arbor Vitæ, (15 in.)

Also, 50 of the finest sorts of PEARS, standard and dwarf.

Priced list sent to post paid applicants.
Oct. 1.—4t. B. M. WATSON.

HIGHLAND NURSERIES, NEWBURGH, N. Y.

Late A. J. Downing & Co.

THE undersigned beg leave to inform their patrons and the public in general, that their stock of

FRUIT & ORNAMENTAL TREES, SHRUBS, &c., &c.,

For Autumn planting, is unusually large and thrifty, especially PEARS, PLUMS and APPLES; of most of the standard varieties of the latter there are several thousand trees, three and four years old, of large size suitable for orchard planting, together with a general assortment of Cherry, Peach, Nectarine and Apricot trees. Also, Grape vines, small fruits, &c., &c.

Portugal Quince Trees, standard height, 6 ft,...............	$1 00
" " quenouille " "	1 00
Angers (*true*) " " " "	1 00
Smaller trees of the above, price,..............................	0 50

Hedge Plants.

Buckthorn, 2 year old, per 1000,.....	$ 8 00
Osage Orange, " per 1000,..............................	12 00

The ORNAMENTAL DEPARTNENT is full and complete; for particulars see Catalogue, a new edition of which is just issued for 1848 & 49, and will be sent to all post-paid applicants.

Orders respectfully solicited, and will receive prompt attention, which will be carefully packed and shipped to any part of the Union or Europe

N. B. Catalogues to be had gratis of the agent in N. Y., GEO. G. SHEPHERD, 143 Maiden Lane, and at the office of "THE CULTIVATOR," Albany. A. SAUL & CO.
Highland Nurseries, Oct. 1, 1848.—2t.

FRUIT TREES.

THE Subscriber now offers for sale at his nursery in Canterbury, Orange County, N. Y., a general assortment of Fruit Trees, embracing all of the most valuable varieties of fruit, with many that are new and Rare. And having obtained them all from the best sources, or from bearing trees of well known varieties, and proved a large proportion of them on his own grounds; and the budding and marking of all his trees being done with his own hands, assisted by his Son; and devoting his entire attention to fruit trees only, he believes them to be equally correct with those of any other establishment.

His stock of APPLES, embracing many thousands, is large and very thrifty, at $20 per 100.

Trees of small size for the Western States, at low prices.

With grafts of all the varieties at low rates.

See Catalogue, which will be sent to all *post paid* applicants.

Also for sale, 30,000 SEEDLING PLUM STOCKS, one year old, and 5,000 one year old BUCKTHORN PLANTS.
Canterbury, Oct. 1, 1848.—1t. CHARLES HAMILTON.

MERINO SHEEP FOR SALE.

HAVING arrived at a point in which I desire to reduce my stock of Sheep, I have therefore concluded to sell about 600 Merino Sheep this fall, which have been bred with great care, and are inferior to none in the United States—200 of which are half bloods, from the importation made by Mr. Taintor. Nothing need be said to recommend them, for they recommend themselves.

Cornwall, Sept. 1, 1848.—3t. A. L. BINGHAM.

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ANNUAL MEETING N. Y. S. AG. SOCIETY.

THE Annual Meeting of the N. Y. S. A. Society, will be held at Albany on the 3d Wednesday, (17th) of January, 1849.

Preminms will be awarded on Grain and Root crops, Butter, Cheese, Fruits, &c. Statements should be furnished the Secretary early in January. It is desired that there should be a full representation from the County Societies, as well as of the friends of Agriculture generally.

A *Pomological Exhibition* will be held at the rooms of the Society, and growers of fruit are respectfully requested to forward specimens to the Secretary, as early, if practicable, as the 15th of January.

B. P. JOHNSON,
Secretary.

Nov. 1, 1848—3t.

PERUVIAN GUANO.

FIVE hundred tons of genuine Peruvian Guano, fresh from the Chinche Islands, now landing from on board ship, for sale in lots to suit purchasers. Farmers will do well to be upon their guard of whom they purchase Guano, as much is sold under the name of Peruvian, which is *spurious* and almost entirely worthless.

PLOWS, &c.—Upwards of sixty different kinds of Plows, Harrows, Cultivators, Thrashers, Horse Powers, and Agricultural and Horticultural implements of great variety.

FIELD AND GARDEN SEEDS.—A complete assortment.

A Descriptive Catalogue of the above, of 100 pages, will be sent gratis to all who request it, *post-paid*.

Apply at the Agricultural Warehouse and Seed Store of
A. B. ALLEN & CO.,
189 & 191 Water street, New-York.

Nov. 1—2t.

KINDERHOOK NURSERIES,

Kinderhook, N. Y.

H. SNYDER begs leave to inform the patrons of this establishment and the public in general that his stock of ***FRUIT TREES*** for sale for autumn planting, is large, comprising all that is choice and rare, of recent introductions; as well as a full and large assortment of all the leading standard varieties. Also

100,000 *Seedling 2 yr. old Apple Trees*, $5 *pr.* 1,000,
10,000 *Plum Seedlings*, 1 *yr old*, $10 *per* 1,000.

Also, English Hawthorn, Buckthorn, Privet plants, Arbor Vitæ, for screens and hedges

Ornamental trees, of extra size, suitable for streets or lawns, consisting of

Elms, European Lindens,
European Mountain Ash, Maples,
European Larch, Norway Spruce, Firs,
&c., &c.

A good collection of flowering shrubs and greenhouse plants, including many of the most brilliant Roses of new and rare kinds.

Catalogues and information by letter, furnished on all *post paid* applications; and trees securely packed so as to be sent with perfect safety any distance, by railroad or otherwise.

Nov 1, 1848—1t.

SCHOOL OF APPLIED CHEMISTRY,

Attached to the "Department of Philosophy and the Arts," in Yale College.

B. SILLIMAN, Jr, Professor of Chemistry and the kindred Sciences applied to the Arts.

J. P. NORTON, Professor of Agricultural Chemistry.

THE Instructors in this department have opened a commodious laboratory on the College grounds, where they are now prepared to receive pupils in special and general chemistry. The system pursued with those who design to become chemists or to study the science extensively, is thorough and complete. Such students always commence with an extended course of qualitative examination of unknown substances—and in due time pass through a series of varied quantitative determinations. To those who wish to follow special investigations connected either with the arts, agriculture or pure science, every facility will be afforded, both in organic and inorganic analysis.

Prof. B. SILLIMAN, Jr., will instruct particularly in general elementary and analytical Chemistry, Mineralogy and Metallurgy, with special reference to their application to the useful arts. He will also give a course of lectures on Mineralogy and Metallurgy, continued through the summer term. During the fall and earlier part of the winter, he will also carry a class through a course of elementary Chemistry, in elucidation of the regular course on this subject in the Academical department.

The instruction in the professorship of Agricultural Chemistry is intended to unite, as much as possible, practical views with theory; to give the untaught farmer an opportunity to become acquainted with so much of science as shall enable him to reason upon his daily pursuits, and to understand the great principles upon which good cultivation must depend, presented in so plain a form as to be within the comprehension of all. Few chemical terms will be employed in the lectures, and those only of the simple explanations; they will thus be understood by those who have never devoted any attention to the subject. A regular course of lectures will be delivered in the winter of each year, commencing in January and continuing about two months, there being four lectures in each week. The subjects of the course will be—the composition and nature of the soil, the plant, and the animal—theories of rotation of crops, and of feeding—modes of draining—the different kinds of manures, their value and how beneficial—the improvement of waste lands, &c. &c Text-books will be indicated for study during leisure hours.

In connection with the lectures, will be a short course of elementary Chemistry, for such as wish to study somewhat more of chemistry than is given in the course, and to qualify themselves for making ordinary testings and qualitative examinations of soils, manures, &c; this course will occupy two hours of five days in each week during two months.

The fee for the Lectures on Agricultural Chemistry will be $10. That for the Elementary Chemical Course, including apparatus and reagents, will be $25.

Students in Analytical Chemistry are allowed to work in the laboratory during the whole day; glass will be furnished, (with charges for breakage,) also the ordinary reagents and balances for the use of those who are so far advanced as to require them. There will be frequent recitations, and the students will receive the constant attention of one or both of the professors. The fee for this class will be $20 per month.

The vacations will correspond with those in the Academical departments, viz:—six weeks from the third Wednesday of August; two weeks from the first Wednesday in January; and four weeks from the third Wednesday in April of each year. Sessions begin with the close of each vacation, and are in length respectively, 14—14 and 12 weeks.

Students in this school will enjoy all the advantages to be derived from the extended means of the institution in Libraries, Instruments and Collections. The Mineralogical and Geological collection is widely known as one of the best in the country, and there are smaller collections in the possession of the Professors. Those who desire it can have access to the Lectures on Chemistry, Mineralogy and Geology, by Prof B SILLIMAN, Senior, and to the Lectures on Natural Philosophy, by Prof D. OLMSTED.

Instruction is also accessible in higher Mathematics, in Engineering and the use of Instruments, in Philology, History, Oriental Languages, and Belles Lettres.

The department of Philosophy and the Arts in Yale College, of which the School of Applied Chemistry is a part, has been organized with a view to meet the wants of those who desire to follow the studies embraced under it further than they are pursued in a collegiate course. Those who desire further information on this subject, are referred to the annual catalogue of the Institution for 1847, '48.

A college education is not however required of those who become students under this department.

The Professors are always accessible to those who wish to consult them on matters relating to their several departments; and will undertake such analyses as may be entrusted to them. Letters of inquiry will be promptly attended to.

Analytical Laboratory, Yale College, New Haven, Nov. 1848.—2t.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
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LUTHER TUCKER & SANFORD HOWARD, Editors.

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Payable always in advance.

THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND MIND." SERIES.

VOL. V. ALBANY, DECEMBER, 1848. No. 12.

CLOSE OF THE YEAR—THE CULTIVATOR FOR 1849.

THE present number completes the fifteenth volume, (the fifth of the new series) of THE CULTIVATOR; and we avail ourselves of the opportunity to tender our thanks to the numerous friends who have so liberally aided us in our past labors. We trust that the acquaintance, which, with many of our readers, has existed from the beginning of our work, has been mutually beneficial; and we have reason to hope that the connexion will be continued with the same advantages as have heretofore been experienced.

We regret to be under the necessity of informing our readers, that since our November number was sent to press, our office has been destroyed by fire—a circumstance which caused a delay in forwarding a portion of that issue. The fire broke out at about half past 12 o'clock on the night of the 28th of October, in the store of Mr. D. Harris, adjoining Mr. EMERY's Agricultural warehouse, in which was the office of *The Cultivator*. There being only a wood partition between the stores, both were soon enveloped in the flames, and entirely destroyed. Mr. EMERY's loss was nearly $6,000—$4,000 insured. Our loss was about $5,500 on which there was an insurance of only $1,150—leaving a total loss of over $4,000. Among the property destroyed, was 2,600 bound vols. of The Cultivator, and nearly all the back numbers of the current year, not more than twenty sets being saved. All the engravings used in The Cultivator, from its commencement, with the exception of some few loaned out, were also burnt. We have, however, all things in readiness, and shall go on with our publications, "*The Cultivator*," and "*The Horticulturist*," as usual, for both of which we solicit the kind offices of our friends.

Our next volume will be commenced on the first of January, 1849, under circumstances equally as favorable to the character and usefulness of the work, as have ever before existed. Our facilities for rendering the work in which we are engaged, a valuable medium of general communication for American farmers, may be understood and appreciated by those who have been familiar with its pages. To say nothing of the editorial labors, it may be safely asserted that no agricultural work in this country has ever possessed a correspondence of half the extent of *The Cultivator*—several of the last volumes having embraced the contributions of upwards of *three hundred* individuals, most of whom are practical farmers located in different sections from the British Provinces to the southern confines of of the United States. The mass of facts and interesting information that is annually collected by communications from so many intelligent minds, all engaged in the same pursuit, cannot fail to be regarded as of great importance; and considered in connexion with other obvious advantages, we think will place the Cultivator *prominently* before the public.

We would call attention to the *List of Agents* published in our present and last numbers. We hope all will use their efforts to get up larger clubs than heretofore, in their respective neighborhoods. We shall gladly avail ourselves also of the aid of any persons who may be disposed to use their influence for the circulation of our work.

Truly grateful, as we certainly are, to all who have heretofore so promptly lent us their aid, by raising clubs of subscribers annually for *The Cultivator*, we beg leave to ask their renewed and increased attention to the subject at this time. It cannot be doubted but that the circulation of our paper might with suitable effort, on the part of our agents, be doubled the next year. We have offered, in the *List of Premiums* for subscribers to our next volume, (for which see last page of this paper,) inducements which we trust will cause greater exertion than has heretofore been made, to promote its circulation. The premiums amount in all, to over TWO HUNDRED AND FIFTY DOLLARS.

December will be found a favorable month to obtain subscribers. The travelling is generally good, and the farmers, having now secured their crops, can enjoy the favorable opportunities thus afforded by the long evenings for reading and study. How can a portion of their time be better devoted than by an interchange of ideas, through the medium of such a paper as The Cultivator, on subjects involving, in so high a degree, their best interests? Is there any one among the thousands who have read the last volume of our paper, who does not feel convinced that he has been benefitted by the matter it contains, to ten times the amount of its cost?

CONNECTICUT FARMS.

Having had an opportunity the past autumn, of passing through a portion of Litchfield county, Ct., we submit a few remarks in relation to some of the farms we hastily examined.

The general surface of this county is much broken, a large part being hilly or mountainous, and the soil, in many instances, naturally rocky, cold and wet. These characteristics mark it rather as a grazing, than a tillage district; and we, consequently, find that the principal agricultural products are butter, cheese, wool and cattle. The rarity of plowed fields and grain crops, strikes the attention of the traveller accustomed chiefly to arable farming, as a novel circumstance, and might lead to an unfavorable conclusion in regard to the advantages of the section, and the condition of its rural population. But though limited in the variety of their agricultural productions, we are convinced that there are few neighborhoods where the farmers, generally, are in more independent circumstances than here; which shows that there are facilities for prosecuting certain branches of husbandry advantageously. The moist and stony soil—even where it is impervious to the plow—readily produces grass, and affords pasturage to sheep and cattle. The smoother and better parts of farms are reserved as meadows, and furnish hay for wintering the stock.

The section is susceptible of great improvement by draining. Much of the land on the large swells is naturally too wet, even for grass--many places producing only coarse, aquatic plants, and others a less nutritious herbage than might be grown if the soil was properly drained. The sloping position of the land renders its drainage comparatively easy, and in many situations, plenty of stones for filling the drains might be taken from the fields, and with decided advantage as to their fitness for tillage.

We believe that improvements, by drainage and otherwise, may be undertaken in this section with every prospect of success and profit. The trials which have already been made, as well as all the circumstances bearing on the case, clearly indicate this. With the advantages of a ready market, and good prices, for every description of produce, which are here offered, we should anticipate a better remuneration for judicious expenditures in improving these lands, than from agricultural operations in the "far west;" and we think a proper appreciation of the whole subject cannot fail to check the tide of emigration.

We are happy to say that a spirit of improvement is evidently awakened among the farmers of this neighbornood, and it is to be hoped that they will persevere, as they have every encouragement to do, in the good work they have begun.

The southern part of the county is less elevated than the central—or about Goshen and Litchfield—and is much better adapted to the general purposes of agriculture. Though hilly, the aspect is generally pleasant, and the scenery often fine. Watertown, adjoining the line of New Haven county, embraces a tract of good land. Grass is the principal product, but good crops of Indian corn, rye, barley and oats are raised, and apples, pears, peaches, and other fruits are readily obtained. Lands in this neighborhood have greatly risen in value within a few years. Farms which, only twelve or fifteen years ago, would scarcely sell for fifteen to twenty dollars an acre, will now bring thirty-five to fifty dollars. This advance has been caused chiefly by the enterprize of a few individuals, who, by their well-conducted improvements, have developed the actual resources of the soil, and displayed the results of judicious husbandry.

We saw in Watertown many farms which presented gratifying evidence of the good management and thrift of the occupants; though from the shortness of our visit and the unfavorable character of the weather, we were prevented from making more than cursory observations.

The farm of John H. Nettleton consists of 200 acres. It received the first premium as the best cultivated farm in Litchfield county in 1844. It lies mostly on the eastern slope of a large hill. Previous to its coming into the possession of the present owner—about fifteen years since—much of the tillable portion had been "hard run," and was given up as "worn out" and good for nothing. The whole farm would support but little stock, and produced no crops that paid the expense of cultivation. Mr. N. immediately commenced improvements. He dug out the loose stones, blasted rocks and built walls; made drains, subdued alders and other shrubs; then plowed the cleared and drained parts, sowed grass seeds, and top dressed with plaster. The reclaimed lots soon yielded large crops of grass, and enabled him to commence keeping cattle and sheep. He has now gone over more than a hundred acres, a great part of which is brought into what may be called permanent meadow, and is, notwithstanding its former roughness, so smooth that the scythe readily takes the whole crop. The mowing grounds are sometimes—say one year in three or four—pastured with sheep, which tends to thicken the sward and keep out wild plants, and this course, with occasional light top-dressings of plaster and manure on the poorer parts, keeps up the grass, with no diminution of quality or quantity.

The usual stock of the farm is thirty head of cattle, two hundred sheep, and five to six horses of different ages. The cattle are high-grade Devons, which are found to do well for all purposes. We noticed several handsome cows, and a bull—the latter we believe took the first premium at the late show of the county. He is of remarkable bulk for his frame, and one of the strongest-made and most muscular bulls we have ever seen.

The flock of sheep has been noted as a good one for several years. The wool is of excellent quality for Merino, and the average weight per fleece over four pounds, washed. Mr. N. has exhibited rams at some of the shows of the New-York State Ag. Society, which have been commended by good judges.

Mr. N.'s buildings are well designed His dwelling is a good specimen of a farm house—sufficiently spacious, neat in appearance, and comprising all the conveniences and labor-saving appurtenances which intelligent Yankee men and women so well know how to provide. Owing to the difficulty of conveying heavy loads over a hill farm, especially in spring while the ground is soft, Mr. N. has erected several barns—five in all—in such situations that the hay may be stored, and the manure carried out with as little labor as possible. The stock is wintered at the different barns in such divisions or lots as is found expedient. Each barn is provided with water, either by an aqueduct or well.

The fences are principally walls, the stones for which as before mentioned, it was necessary to remove before the soil could be occupied to advantage. The fields are handsomely divided, and the straight lines of heavy wall, make an imposing appearance.

The farm of Jacob N. Blakeslee, Watertown, consists of about 200 acres, in addition to which he has 100 acres in a farm where he formerly lived. The career of Mr. B. affords a good example of the successful "pursuit of" farming "under difficulties." He began the world without a cent's aid from any body; commenced on a rocky, side-hill farm, for which he ran in debt. Here he toiled for upwards of twenty years, gradually lessening his indebtedness, and constantly improving his farm; till in 1836, he purchased the place where he now resides, by which he incurred a debt that might have frightened one of less judgment and courage. But to him the way appeared plain, and the result proved the clearness of his foresight. He has reared a large family—most of which are comfortably settled in the vicinity—has greatly enhanced the value of his farm, by various improvements, and has nearly cleared it from the incumbrance of debt.

His principal products of sale have been cattle, horses, sheep and wool. He now cuts from 100 to 150 tons of hay annually—keeps fifty head of cattle, two hundred sheep, and six horses. Eight of his cattle are full blood Devons, and the rest are from half to fifteen-sixteenths of that blood. He has twelve yoke of oxen and steers, most of which are fine, several *extra*. His six-year old oxen, three-fourths blood Devons, received the first premium on working oxen "raised by the owner," at the late show at Litchfield, and have since, (we learn) been sold for $150, to go into the navy yard at Brooklyn. They are splendid cattle, well broken, and of great vigor and power. Several of his cows, heifers, and other young stock are fine.

Mr. B.'s flock of sheep has been widely known for many years. His home flock is now less in number than usual—he has kept 400 to 600. He commenced this flock in 1815, by the purchase of some Negretti and Montarco Merinos, imported by Peck & Atwater of New Haven. This stock was bred together till 1823, when it was crossed by rams bred by Daniel Bacon, of the Escurial, crossed on the Merino stock imported by Gen. Humphreys in 1802. Since 1823, Mr. B. has used only rams bred by himself. The present condition and character of his flock does him great credit. The sheep are in general of beautiful form, with white, soft elastic wool, ranking next to Saxon in fineness, and affording a large weight per fleece, in proportion to the size of the sheep, which are rather small compared to some Merinos. We are not able to state the precise relative weight of the fleece and carcass—the former weigh from four to five pounds each, washed.

Mr. B.'s improvements on his farm, consist in draining the wet portions, digging out stones, smoothing the rough places, and building walls, of which he has two thousand rods—much of it very thick and substantial.

Mode of raising corn.—We noticed that Mr. B., as well as Mr. Nettleton and others in this neighborhood, adopt a mode of plowing their land for corn which we think well of, where the land is cold or wet. Two furrows are turned together, in the form of what is usually called "back-furrows," just so that the edges will nearly touch. This is commonly done in the fall, and the corn is planted at the proper time in the spring, in the centre of the ridge, or between the edges of the furrows. If manure is used, it is spread on the sward, and the furrows being turned together, it is kept within reach of the corn roots, while the extra warmth which the soil from its position receives, causes a rapid growth and gives a surer and better crop in many situations than could be had by the ordinary mode of plowing. We saw a good crop—at least forty bushels to the acre—at Mr. Nettleton's, raised in this way without manure, on a high hill, heretofore used as a pasture.

We made very short calls at several other farms in this vicinity, but had not time to gather particulars. Mr. Heminway, the obliging agent of the *Cultivator* at Watertown, has a small, neat farm, remarkable for the production of grass. A portion of it is much benefitted by irrigation. Being engaged in trade, he is obliged to make agriculture rather a secondary than a primary object.

Stephen Atwood, has a fine farm of 300 acres, lying partly in Watertown and partly in Woodbury. This farm received the first premium from the county agricultural society the present year. Mr. A. was absent at the time of our call, on which account we obtained but little information in regard to the products and management. The appearance of the farm is highly favorable—the buildings well planned and in excellent order—the fences good—the fields smooth and handsome. The farm is well stocked with fruit trees. The apple orchard is large, the trees flourishing, and the varieties good.

His cattle comprise some good specimens of the Devons, and several handsome grades. He has some good Merino sheep—about seventy in the whole flock. They are strong, well-made sheep, rather large, and yield heavy fleeces, of medium quality. The wool is thick, and highly charged with yolk, but we presume gives a good staple for manufacturing, when it has been properly cleansed.

The farms of George F. Merriam, Dayton Mattoon, Edward Hicox, (the latter having taken the first premium in the county several years since,) Chas. Atwood, James Garnsey, Andrew S. Darrow, and Chandler Judd, all exhibit creditable management, and show that the owners are awake to their true interest. Their practice is evidently based on the principle that the land should be improved, not deteriorated, if the greatest ultimate profit is to be secured.

Education of the Young for Agricultural Pursuits.—Where an ardent thirst is begotten in the minds of youth, to become thoroughly prepared for an honorable and useful discharge of the active duties which make up the sum of a happy life, the great first step is taken towards the accomplishment of so glorious an end. We turn our attention to parents, the natural guardians of the young, possessing power to mould and fashion the tender mind, to lead and direct aright the early inclinations as they are first developed. To parents we appeal, assured that their influence will be exerted, to lead the children under their care to contract an attachment to the employment in which they are engaged. Let the son be thoroughly instructed in every branch of labor to be performed upon a farm, and in its management in general, and no doubt, with proper opportunities for instruction from suitable books and well-regulated schools, he will fall in love with the science, and delight in the practice of agriculture. In the successful prosecution of this highly honored and peaceful pursuit, female effort and influence are indispensable to lead to auspicious results. I am aware that some persons of near-sighted and contracted views, have expressed the opinion that the female mind ought to be occupied altogether in the contemplation of unreal things, of ideas that float in a feverish or excited imagination, and of outward accomplishments, and be content to dwell upon the surface of subjects, without an attempt to dig deep in the mine of knowledge. No one honored with the title of mother, can for a moment listen to any such suggestion; but will, I am sure, put forth their utmost exertion for the fullest expansion and enlargement of the intellectual and moral capabilities of their daughters as well as their sons.—*Mr. Ives' Address before the Jefferson Co., N. Y., Ag. Society.*

AGRICULTURAL SCHOOLS.

Although much has been said and written on the subject of agricultural schools, we presume a vague idea only prevails in the minds of many, in regard to the proper system on which such institutions should be based, or what courses of study and instruction should be there pursued, in order to confer practical benefits on the pupils. Too much weight and importance appears to have been given to the inculcation of abstract theories, which, however correct in themselves, could not be used by the student in a profitable manner, without a thorough acquaintance with the manipulations in which their applications were involved. Perhaps the ill-success which has attended several attempts to establish schools of this kind in this country, is in a greater degree attributable to the want of a proper combination of "science with practice," than any other cause. We are informed that similar failures attended the first efforts of this kind in Europe. Even in Germany and Prussia, where the practical utility of such institutions is now almost universally acknowledged, they could not be made to succeed till the system of instruction was made to comprehend a thorough knowledge of all facts and operations on which the *profit* or *loss* of farming depends.

Attention to the subject, by able and practical minds, soon ascertained the root of the evil and devised the remedy. "They found," says one familiar with the course of agricultural education in Germany, that "it was the practical knowledge which had been wanting, to enable the farmer to construct an effective machine which increased its speed in proportion as the oil of science was added. Thus it was proved that neither science nor the thorough understanding of any *single* branch of agriculture (as breeding cattle or raising a fine crop) was enough to insure the ultimate object in view. For this, was required the knowledge of every branch, separately as well as collectively, the knowledge of calculating and securing combined results; how to estimate the cost of manure, and how to employ it to the highest advantage; to calculate the amount of cattle, the food necessary to produce the required quantity of manure for the rotation adopted; and a number of like practical questions, which must be understood by all those who wish to till the land with profit. A completer science showed that farming was more intricate than was first supposed; that it requires a regular study like all other pursuits, and this led to the idea of establishing proper agricultural schools, wherein all the sciences which bear upon agriculture, and all the practical branches separately and in connection with others; in a word, *the economy of farming* should be taught."

There are now several such agricultural schools in various parts of Germany. The young men there educated, are employed as professors for other schools, as directors for large estates, or they carry on farming for themselves; and in all these relations, the practical advantages of their education and training has been evinced.

Mr. **Fleischmann**, to whom we are indebted for the remarks we have quoted above, informs us that in some of the German states, pupils of the various schools are publicly examined under the direction of societies consisting of owners and superintendents of estates—the object being to ascertain the qualifications of the young men for the successful management of farms. Mr. F. attended one of these examinations, at which sixteen pupils, of from 16 to 23 years of age from various schools, were present. He has given in the Report of the Com. of Patents, for 1847, the following account of the examination. If the pupils could answer, properly, all the questions here given, their knowledge of the details of husbandry must have been very perfect.

After the necessary preliminaries, the pupils were required to answer a number of questions in writing; after which they were taken to an estate called Rosenthal (Rosendale) near Breslau. In the yard, the pupils were shown a wagon, which was marked on thirty-six parts; a plow, on thirty-five parts; a hacken (a kind of plow or cultivator) in five; a harrow on six parts, making eighty-two separate parts. Each pupil had to put down on paper the name of each part, as they were marked, to show whether he was acquainted with all the parts of the implements. After that, they had to show their skill in taking apart and putting together implements, and in case of breakage, to mention the most efficient way of repairing, &c. A sheep was then brought forward, and they were required to set down on paper, the answers to the following questions:

1. Is this sheep healthy, and why?
2. How old is this sheep?
3. How is this age called in the shepherd language?

Each one was next required to catch a sheep himself and examine it, whether it had the foot rot, and describe what are the signs of the foot rot. They had also to point out upon a sheep the places where the worst wool grows and on which place the best: To point out the places where the faults of wool are most liable to be inherited.

Several head of cattle were now brought before them and the following questions propounded:

1. How much milk can a cow of this breed give, when fed with grass or other green fodder—how long since she had a calf?
2. How many pounds of fodder does a cow of this breed require per day, during the summer?
3. How much during winter, and the cost?
4. How many calves has this cow had?
5. How old is this cow?
6. What breed, and why do you say so?
7. How much will she weigh?

They are then called upon to estimate the probable amount of meat and fat, by examining the animal in the customary way of butchers. After that they were examined upon horses: the horses were first examined by the pupils, and the following questions required to be answered:

1. What are the peculiar qualities of this horse as a plow horse?
2. Which of these qualities are requisite for a good plow horse, and which are not?
3. How old is this horse?
4. Several places were pointed out to the pupils, and they were asked what kind of disease affects this part and that part?
5. What are the names of the different parts of the hoof, and where are those parts?

The pupils were now conducted to the barns, where they had to show their skill in making straw bands, in cleaning grain, &c., in sowing grain, &c.

After this, the pupils were taken to the fields, first to one of a light soil, and afterwards to one of a heavy soil, and the following questions were put to them before a fresh parcel of soil just dug up:

1. What is the name of this kind of soil?
2. What are the names of the principal parts of which this soil is composed?
3. What is the name of the subsoil?
4. Is the subsoil retentive or not?

5. What kind of crop succeeds the best on this kind of soil?

6. How large would you make the beds on such a soil? and why?

7. Is this heavy or light soil, cold or warm?

The same questions were asked as to another kind of soil at a different spot. The pupils returned and gave from their notes the required answers.

The questions which they were obliged to answer in writing, were as follows:

I. In the case of a heavy soil, sown with wheat and oats, and in that of a light soil sown with rye,—state for every month.

1. How much plowing and harrowing has to be done?

2. With how many horses or oxen?

II. How much manure will you require for it, expressed in loads? Do you call that heavy or light manuring?

III. How will you treat the manure in the stable, in the dung-hill and in the field?

IV. When you have at command Janche, (drainings of dung-hills,) and mineral manure, how and for what crops would you use them?

V. What kind of weeds appear in the summer and what kind in the winter crops?

VI. And how will you destroy them when there are such?

VII. How can you prevent these weeds from coming up?

VIII. You have good and bad meadows—to what kind of cattle will you give your best, and which the worst kind of hay?

1. In the naked fallow, suppose that there is planted rape after clover, from which one cut was taken, let there be sown wheat. After peas, let there be planted potatoes—ten acres for each kind of crop:

The required work for each kind of crop to be done in two days?

How much labor of cattle is required in every period?

2. A field of twenty acres is to be manured with eight loads per acre, about the month of June: The field is 1000 paces from the farm yard: All must be done in five days: The manure must be strewed in three days:

How much labor of cattle and hands is required?

3. A meadow of middling quality, of thirty acres, must be mown in two days; the grass must be immediately spread; when dry, it has to be brought home in a day, about two miles from the yard. How many span of working cattle and labor of hands, how many men and how many women are requisite?

4. The crop of a rye field of twenty acres must be brought home in two days. How many laborers

(*a*) To make straw bands?
(*b*) To mow?
(c) To gather and bind?
(*d*) To bring together and for loading?
(*e*) To bring to the barn?
(*f*) How many span of oxen or horses to haul it?

5. The crop of ten acres of wheat, oats and barley, must be threshed in nine days and taken to the market, ten miles distant. How much labor, &c., of men and animals?

6. In a heavy soil there shall be made in two days, a ditch of three feet depth, three feet wide at the top, one foot at the bottom, three hundred yards long; how much does it cost per yard and how many hands must be set to work?

7. A meadow of good quality, of twenty acres, about two miles distant from the farm yard, must be mowed in one day—if possible, dried in three days; the hay must be brought in, in half a day and stacked: How many persons and teams are necessary; and what is the probable crop from such a meadow?

To show their skill in making reports and other statements in writing, the following subjects were given:

1. A superintendent reports to his superior an accident on the estate, and describes the necessary steps he has taken.

2. The superintendent gives a written order and instructions to the overseer of the farm.

3. The superintendent makes a weekly report on the income and expenses of the grain, and for seed, fodder consumed by the cattle, on an estate where there are kept sixteen servants, twelve horses and eight oxen.

The next day, the 7th of September, the result of the examination was made publicly known. For this purpose, the board of examiners, the pupils and the audience assembled at the university, and the following statement was made:

That most of the pupils showed skill in the practical manipulations; but that by some, not only skill, but thoroughness was wanting. They were then admonished on the requirement of these practical manipulations in the farming operations.

The trial, as to the names of the parts of the implements, as well as the remedy when broken, &c., was declared not satisfactory; that a better knowledge of the parts of such implements with which the farmer has every day to work, is required and expected.

In the examination of soils and the best kinds of crops for them, the pupils showed considerable knowledge and correct views, but the knowledge in sheep breeding was rather slight; they showed more experience in horned cattle, and the most in their judgment of horses.

In the examination on the culture of crops, they proved well experienced; less so in that of herbage and fodder; had little knowledge in the value of a substitute for fodder, but were entirely deficient in the *economy of farming*, and showed a want of judgment in the quantity of force required for certain labors. The study of this important branch was recommended to their special attention, to acquire a correct knowledge of the amount of labor required for agricultural operations, in order to economize the most important capital, time, which can never be replaced.

The report upon the result of this examination, was very independent and honest. It was not like those of institutions of education, where the principal and teachers train the pupils, in a certain set of questions, to astonish the audience on the day of exhibition, when they publicly deceive, as to the high qualifications of the pupils, in order to increase the patronage of their manufactory of learned boys and girls, defraud the parents of their money, the children of their most precious time, and force upon the public a set of ignorant, conceited pretenders, who, instead of adding to the progress of things in general, retard it. This examination would have sufficed in many other places, and the pupils would have been crowned with laurels; but here, the examiner wished not to recommend a young man for a place, when he was convinced the pupil would ruin his employer, and injure the reputation of his teacher and the society.

At the close of the president's practical remarks, it was stated that it was the object of the association to ascertain what the young culturist has acquired during his practical studies; that a higher practical knowledge is required to become a director of estates, and that can be best accomplished by travelling. Further, that it had been hitherto the belief, that every simpleton could be a good agriculturist, and when every attempt failed to get him along in the world, the farming business was looked upon as the receptacle of all family prodigies of dullness. Of this error, the bad effects were every where visible. It was proposed to the general meeting, to take under consideration the establishment of proper agricultural schools for the less wealthy.

After the close of the examination, a discussion was held on the question, "Are institutions necessary in which a young man can acquire all practical knowledge?"

This question was ably debated by the professors of agriculture. It was thought that the separation of the theory from practice was injurious—both must be combined. Professor Schweitzer of Tharand in Saxony, thought that both can be acquired separately; he recommended that practice should be first learned, and theory afterwards—that the young man should have obtained a good common school education before he undertakes the practical study, and should afterwards finish his scientific education at an agricultural school. Thaer (the son of father Thaer,) demanded also a thorough elementary education, and then the learning of all the practical manipulations. These practical institutions, he thought, should not be too extensive, so that the owner may attend to the whole himself.

THE RIGHT OF PROPERTY---In What does it Consist?

In different sections and by different individuals this question will probably call forth different answers, as the tastes, habits and interests of those concerned shall dictate. Thus the merchant will say, my property is vested in stock, goods, cash on hand, and debts due. These I invest in such a manner as shall promise the quickest and best return. I am careful in small things in the management of my concerns. A yard of tape or an ounce of nutmeg, I usually turn to a profit of from 100 to 200 per cent. If a villainous scamp takes one or the other of these articles from me, he wrongfully takes away my property, is guilty of larceny, and punishable by the law of the land. I must enforce this punishment, not only for my own safety, but for the good of community, whose interests are always in jeopardy by having a thief at large among them. It is not so much the value of the thing I contend for, but the principle. *I bought the article; it was mine*, and if small things are not safe, large ones will soon be missing, I know not to what amount. Very good, Mr. Merchant, you are right, and we will gladly help you catch the thief.

Take the physician or the lawyer; say to one, you are unwell to-day. He will advise you to a simple prescription, or perhaps give you a trifling amount of medicine, or inquire of the other respecting some trifling point in law. You have in both cases taken counsel, and probably in both cases a fee will be required for a detention of three minutes, which might otherwise have been spent in fruitlessly discussing politics or perchance in asking you some question of no importance to any one. Why is this? You have taken *professional* counsel; their professions are their property, they must live by them, after having spent money for instruction and years in studying their mysteries. This, too, is right, beyond question or dispute.

The mechanic has a similar plea. He spent an apprenticeship of time in getting his trade, and his stock is property acquired by purchase. In this he must see his money refunded, and for his present time, and that which was spent in learning how to do the things you wish to have done, he must have compensation, for he too must live, and setting a patch on your shoe, or sewing a buckle to your harness, things inconsiderable to look at, he must be rewarded. Very right that he should be, for the reward is his honest due.

But how is it with the farmer? He, too, if he would succeed in his profession, must study, for ignorance shows her folly in cultivating the earth, if she does any where; he must have his cash capital invested whether he purchases, hires or takes on shares, as much as the merchant or mechanic; his time and his education are as much his living, as are those of the physician or the lawyer. He probably owns his farm, as most of our American cultivators do, and has a clear deed of the soil, "with all the privileges and appurtenances thereto appertaining," to be held by himself, his heirs and assigns forever, free and clear of all encumbrances whatsoever. Now the question is, is this land so purchased and so deeded his property? Does he hold it by the same right that the merchant, the mechanic or the lawyer does his? In one respect he does, for the law calls it property when she demands her tax for its protection, and as he improves his cultivated grounds and makes them more productive, and as the size of the timber in his woodlands increases so that they will yield a heavier burthen, law taxes them *higher* because their value as property is increased; and he who holds the deed of these premises is considered their true, lawful, and only owner. The tax is set to him. He must pay it or his lands are taken from him, and sold to make good his delinquencies.

Then if the lands are his, he must have a right to appropriate them to such productive purposes as his convenience or interest may dictate, and the productions must be his, and not the property of another. If he clears a patch of wood-land (as every farmer will find it his interest to do) to get his supply of fuel for the year, and that patch comes up to brambles, and these brambles furnish a supply of healthful food for his family, to whom do they belong? Public opinion says they are public property, and the public are on a strife to see who will get the most. May be the lawyer, the physician, the merchant and the mechanic are there, with a host of little ones who "do love the berries most dearly," and there too so often and so many that the poor farmers cannot get a tithe of the produce. "But they grow wild, are the spontaneous production of the soil, the gift of nature, and not the result of cultivation; this makes them free." Did not the farmer pay as well the value of his land as the merchant did that of his tape, and does not his yearly tax run as high in proportion to the value of his land as that of the merchant? Does not the very fact of ownership give as good a right to occupancy and use in one case as the other? If his soil will produce berries, while the successive growth of wood is shooting up, is it not his good fortune, and an assurance from nature that her productive powers are never withheld in giving those who seek to see her bounties increased? We can see no reason why those berries are not *the property* of the farmer and his alone, as much as the tape, the nutmeg or the broadcloth of the merchant are his. This however, is but a small consideration. We will suppose that nature has provided chestnut or walnut or other fruitbearing trees, and the soil on which these trees stand has become his by purchase, by their value in money actually being paid for them, and oftentimes his labor is expended in such ways as will tend to increase their value as nut bearing trees, by removing underwood and such trees as have a tendency to hinder the expansion of the branches and making the ground feasible for gathering the falling fruit. Are these trees, after all this care, *his* property, and like the stock of the merchant and the tradesman, his alone, until he transfer his right to another, or are they the *common stock* of all who wish to avail themselves of his purchase and his care in their behalf? In too many instances common practice says they *are not* his, and how often he is doomed to look upon his trees with sorrowing eyes, for the strange mutilations that have been inflicted upon them, in broken branches, bruised trunks, and all the destroying influence that could be adopted to secure the booty.

Again, take the farmer's field. Perhaps by negligence or perhaps by choice, he has permitted the raspberry or the gooseberry to grow along the old wall side, or the strawberry may have taken possession of the old field; such things, we will admit, are not in perfect accordance with good husbandry. It is in most instances cheaper getting these fruits by cultivation in the garden, and more profitable keeping the meadow in luxuriant grass crops. But this is not always done. Even good farmers may have their grass killed out and have a strawberry harvest from the field before they can bring back their lands to usual fertility. Are the strawberries his or his neighbors? Is the fact that there is not much grass in the mowing field, or along the fences of the grain lot, a sufficient apology for Tom, Dick or Harry's running over and trampling down what there is, provided they got and carried off none of the produce of the field? A merchant once said, in apology for gathering his neighbor's berries, i. e. his neighbor's if purchase gives the right of property, that he did not hurt the grass much, for there was not much there. Supposing this neighbor had gone to the store of the merchant day after day, and thrust his hand into his raisin box, filled his basket, and said he did not hurt the floor much, it was made to walk on, would the merchant have suffered him to have taken his first toll? No, and he ought not, for the raisins were his by purchase and possession, and none other had a right to them. The farmer who did that would have been a thief, and the merchant in his own mind at least, would have branded him as such.

Once more. You have a garden or an orchard. You set out trees in expectation of gathering choice fruit from them. After years, it may be of anxious watching and kindly culture, you see the first buds expand into beautiful flowers, and these flowers in their season succeeded by fruit. You watch its growth with daily solicitude, and as the season of maturity approaches, you see its gay colors taking tint from the sunbeams, and in fancy, realize the triumph of your toil in its exquisite deliciousness. A few days more, perhaps to-morrow, it will fall in its richness to the earth. But to-morrow comes, you resume your watching, but oh, sad thought, the objects of your care are all gone. "Ye have labored and other men have entered into your labor," and taken the first fruit. "What harm was there in it? only a few apples or pears or perhaps half a dozen clusters of grapes, surely none but a niggard would refuse his neighbor these; if he would, he ought to be drummed out of town."

Gentle reader, are these things right, or is it only owing to the frailty of our nature that we see them wrong? Is it giving that protection to the property of others, which we in turn demand from them? If so, let the matter be understood, so that all who occupy lands may be ready at all times to see others enter upon their premises at any time and take and destroy what they please and as much as they please, and set down, complacently looking at the result.

If they are wrong, it is high time for a reform in this matter, which is growing worse and worse, we believe, in almost every section of our country. Do you ask, where shall we seek a remedy? In the first place we would direct to a right education of the young. Teach them by your example that you will no sooner take the property from your neighbor's woodlands or his fields or his orchard or his garden, than you would his money from his desk. Teach your own children these facts, and they will teach your neighbors.

Let it be one of the chief lessons taught in all of our common schools. What greater wisdom can your child imbibe at these institutions than the great principles of honesty, fidelity in the minutia to his neighbor's goods, however trifling may be their value? Consider the teacher unqualified for his station, who fails to instruct in these things, and who allows his scholars needlessly to ramble in the neighboring fields, acquiring territory by conquest to which he has no right. Let a voice come from every pulpit, saying, "thou shalt not steal," and exhorting every one to work diligently with his hands to provide the good things which nature gives to those who labor for their attainment. Let all teach and all practice the principles of right, and gardens, fields and forests, will be as secure as the merchant's or mechanic's wares under his own eyes. William Bacon.

Charring Rails.

On almost all farms may be seen patches of rail fence which have been accidentally scorched by fire. Such rails never decay. Sun, wind or rain seem to have little or no effect upon them. The question naturally arises, whether in building new fences they might not be made much more valuable by charring? It has been shown conclusively that the best time for cutting fencing timber is in May or June, when the bark will peel. This should be immediately stripped off and the rails split and piled up in order to dry. After being seasoned two or three months, take them to the bank of a small stream, and having built a fire of chips or brush, heave on the rails. When they are sufficiently charred, they can be hauled into the stream by means of a potatoe hook, or some similar implement, and when the fire is extinguished, they can be hauled out on the other side. I believe that a fence made of charred rails, and put up with an iron rod inserted through each corner of the fence, and soldered to the underpinning stone, as directed in a former number of the Cultivator, would last fifty years, or five times as long as one not charred, with no trouble at all, after being once put up. It is true the first cost would be considerable, but it would be cheap in the end. If farmers would take the trouble to charr their rails, they would not have to spend weeks in the spring of the year mending up old rotten fence, nor have their crops half eaten up by unruly cattle.

If any of your correspondents have had any experience in charring rails, they would confer a favor by making it known through the columns of your paper. A Young Farmer. *Madison, Conn., Sept. 22, 1848.*

Watering Transplanted Trees.—The following skilful treatment for newly transplanted shrubs and trees, which are in danger of suffering by drying, is worthy of attention,—We have had occasion to make trial of this [wetting the tops instead of the roots] the present season. In one case, a rose imported from Paris, was much injured by long packing. It was, besides, poorly provided with roots, and would have been doubtful if only removed a rod from its place of growth. It has been covered with a barrel having one head during the day, which has been removed at night, for some four weeks. Night and morning, the top of the plant has been wet during the whole time. It is now pushing forth shoots, and the barrel with one head has been replaced by one without any—and which may be soon dispensed with altogether.—*Prairie Farmer.*

Cost of Corn.—S. Williams says in the *Genesee Farmer*, "A farmer told me yesterday that the actual cost of his last year's crop of corn was but 9¾ cents per bushel, interest on land included.

HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

Grapes in the West.

Editors of the Cultivator—In your number for October, you refer to me as authority for the character and quality of the Herbemont and Lenoir grapes. I was in an error till this season, not having examined the fruit at my vineyards. What I formerly supposed to be the Lenoir, proves to be the Herbemont. What I then supposed to be the Herbemont, is, I believe, the McCall Madeira—a grape sent me by Mr. Thomas McCall, an intelligent vine cultivator, in Dublin, Ga. The true Lenoir has never succeeded with me till this season, though I have had it for 10 years. The fruit is nearly equal to the Herbemont, but the bunch is smaller. The Herbemont is a fine table and wine grape, equal to the Ohio in my opinion, and to the Meusneir or Bergundy, and the bunch much larger than the latter. It is a fine wine grape, and the wine in flavor and aroma resembles the Spanish Manzinilla, or Mansinaella, but in my opinion is a superior wine. But with me it rots badly. The wood is of light color, of thrifty growth, and bunches very compact. At our late Horticultural exhibition, it was placed next in quality to the Ohio, and was by a portion of the judges thought preferable.

In their opinion, as reported, in relation to the Elsinburg and Norton's Seedling, there is an error, or I deem them wrong. The Elsinburg, I deem far superior to the Norton. In my estimation you overrate the Little York Madeira, as I deem it inferior both for the table and wine, to the Cape grape, (Schuylkill Muscadell) to which you show no mercy. I obtained the York Madeira from a person in Little York, and raised fruit from it, but found it so inferior, that I rooted it out, and I do not now know of a single plant in this vicinity.

The Cape grape was the only one cultivated at Vevay, Indiana, to any extent for wine, as it was at an early day at Spring Hill vineyard, near Philadelphia, where they called it the Cape grape, pretending it came from the Cape of Good Hope, when in truth it was their next door neighbor, on the then wild banks of the Schuylkill. From it the people of Vevay made a rough, hard, red wine, by fermenting on the skins, and only valuable for the manufacture of sangaree. Pressed as soon as gathered, and sugar added (for it is deficient in the saccharine principle,) and some brandy, it makes a second quality Madeira wine. It is one of our hardiest vines, and least subject to the rot.

We shall not allow you of New-York to abuse our Cape grape, as we hold it to be 1000 per cent. superior to your Fox grapes, about which was made a few years since, so much palaver; and one of your horticulturists had a vineyard of them, with high sounding names, and they were offered for sale and highly lauded, when in truth they are only valuable when lead is scarce, to supply the place of musket balls, and may be of value for that purpose, if my Democratic party should make another war for conquest of a country not even suitable for the cultivation of the Fox grape.

You say that the English deem our native grapes as worthless. It may be because they are not suited to their climate. It may be an error of judgment. I deem all our best natives, (not including your famous Fox grapes) to be far superior to the Miller's Burgundy, (Meusneir,) which they praise highly. The Ohio, Herbemont, Swain, Missouri and Elsinburgh resemble it, but the bunches of the two first are much larger, and the fruit of larger size, and I think superior as a table grape. The Catawba, I deem not only a grape of fine quality as a table grape with us, but worth millions to our country as a wine grape. Major Adlum conferred a great benefit on his country when he brought this grape into public notice; but like all other new discoverers, he derived but little benefit from it.

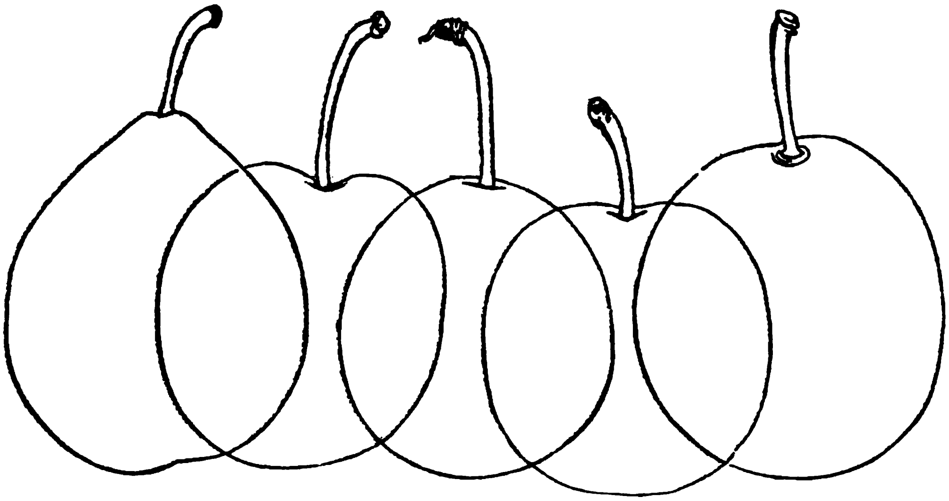
The English hold our strawberries in as little estimation as our grapes, and throw them away as barren. If they were *practical gardeners* and not *great botanists*, they would ascertain that the only value of their famous Keen's Seedling and Beehive, really is to impregnate the Hovey and other kinds, which they call *barren* plants, and the discarded Hovey would produce four times the quantity of fruit that those most esteemed by them will produce, and of superior size. The Beehive may belong to a rare class of strawberry plants, bearing blossoms purely pistillate, and a large portion more or less perfect in both organs, and therefore bearing what may be called a fine crop of perfect and imperfect berries. But the fruit will be found small, and only valuable as an impregnator, unless the fruit should come in very early, which is the case with many staminates; often a week in advance of the pistillates, and where this is the case, go out of blossom before the pistillates, and require a few late staminates to impregnate the late blossoms. Early strawberries, even if small, always command a high price. Eberlin's Seedling, will, I believe, prove superior as a staminate, to any plant now cultivated, and is worth 100 of the landed Boston Pine. With us, with ordinary cultivation, the latter will not produce on an average one perfect fruit from ten blossoms. It is said, that to insure fruit from staminates, the plants must be kept separate. This to a certain extent is necessary with pistillates, to enable insects who carry the farina to get at the blossom. In staminates, as each row has her own master, I should not deem close proximity so great an objection. But experience is better than speculation.

The cultivation of the Isabella grape is yearly lessening in this region. It often ripens badly, one half of the bunch ripening, and the berries of the other half being green. We deem it far inferior to several of our varieties of hardy gapes.. N. Longworth. *Cincinnati, Oct. 12*, 1848.

The Ohio Fruit Convention,

Assembled at Columbus on the 27th of 9th mo. (Sept.) last, and continued its session twotdays. Abou thirty delegates were in attendance. A. H. Ernst, of Cincinnati, was chosen President, and F. R. Elliot, and M. B. Bateham, Secretaries. Sixty-five varieties of apples, and a number of other fruits, were passed upon, and the Convention adjourned to meet next year at Cincinnati. F. R. Elliot, of Cleveland, a person eminently qualified for the service, was appointed to prepare the proceedings for publication, and we doubt not a large amount of interesting and valuable matter will be thus placed before the public.

Liquid Manure—Grapes.—The *Ohio Cultivator* says that a grape vine at a hotel in that state, but three years old, has climbed to the second story, and has extended its branches round the corners of the building to a distance of twenty or thirty feet, nearly the whole being full of clusters of fruit. The only unusual treatment it had received, was a watering every day with dish-water, and occasionally with soap-suds.



Red Diaper. *Bleecker's Gage.* *Purple Favorite.* *Lawrence's Favorite.* *Jefferson.*

The above are outlines of five varieties of the plum, which possess valuable qualities, but are not so widely known as other varieties of less merit.

1. **Red Diaper**, *Diapree Rouge*, or *Mimms*.—Large, handsome, reddish purple; stem half to three-fourths of an inch long, slightly sunk; flesh free from stone, juicy, melting, sweet, delicious, better in flavor than Washington. Tree a rather slow grower. Last of summer.

2. **Bleecker's Gage.**—Medium in size, or rather large, roundish-oval, regular, suture very obscure; stem an inch long, downy, in a small cavity; skin yellow, at first with obscure clouds or stripes, and with numerous white specks; flesh sweet, juicy, rich, free from the stone. Late in summer. Distinguished from Prince's Yellow Gage by its longer and stouter stem, and later maturity; and from Lawrence's Favorite, which it resembles in flavor, by the much shorter stem and more obtuse fruit of the latter.

3. **Purple Favorite.**—Very few plums are equal to this in quality. Medium in size, often approaching large, roundish-obovate, somewhat variable in form, transverse section not unfrequently inclining to triangular; suture obsolete; skin dark dull reddish purple, irregularly or occasionally dotted with whitish specks. Stem nearly an inch long, very slightly sunk. Flesh free from the stone, greenish, tender, juicy, melting, sweet, rich, excellent; not quite the rich sweetness of the Green Gage, but exceedingly agreeable. Latter part of summer. Growth slow.

4. **Lawrence's Favorite**, or *Lawrence Gage*.—Rather large, roundish-oval, slightly flattened at the ends; suture, nearly even with the surface; skin greenish yellow, slightly clouded—and shaded, netted, and dotted, with reddish brown in the sun. Stem half an inch long, in a small cavity. Flesh with a rich greenish yellow hue, with an excellent and rather rich flavor, nearly free from the stone. Middle of 8 mo., (Aug.) Tree upright, thrifty.

5. **Jefferson.**—This celebrated plum has been widely disseminated within a few years. and wherever it has fruited, has maintained its high character. Although not quite so rich or excellent in flavor as some smaller varieties, it deserves to rank among the first, and by some is regarded as decidedly the best of all plums. It is large, oval, obscurely inclining to obovate; stem three-fourths of an inch long, in a small cavity; skin becoming yellow, often tinged with red in the sun; flesh a deep yellow, adheres slightly to the stone, rich, very sweet, juicy, high-flavored. Late in summer.

Pears for the South.

It is only within the last few years that the attention of our citizens has been drawn to the cultivation of such fruits as the peach, apple and pear, in this southern latitude. It was supposed that our southern sun was too powerful to perfect them, but we found we only required experience in their cultivation, and the proper selection of trees for our soil. Eperience has come to our aid, and it is worth what it has cost us to be enabled to luxuriate on our juicy, sweet and excellent fruits.

At one time we became disheartened from the impositions which were practiced on us by the nurserymen at the North, and by itinerant Frenchmen from *Paris*, by way (generally) of New-Orleans. The former, sending out worthless trees which had been picked up at auction or purchased from sources of no responsibility; the latter, by imposing on us worthless shrubs and fruit trees with high sounding names.

The taste for agricultural and horticultural improvement is rapidly increasing in this State, and I have no hesitation in saying, that any nurseryman can win a large share of patronage by integrity and liberality in dealing with us.

Believing that there are many such men at the North, and to enable them when they receive orders for *pear trees* (for to this tree I shall now confine myself,) the selection being left to them, to send trees which will give great satisfaction, we give a list of fourteen pears, which will yield a better return in the shape of profit and enjoyment than has yet been attained by the cultivation of any other kinds. These trees have been already introduced here—they were brought direct from France by one of our citizens, grafted on the *quince* and the *white thorn*, and have been tested and found wellt adapted to the climate and soil of Alabama. The lis is as follows:

Autumn Colmar,
Bezi de Heri,
Summer Bon Chretien,
Doyenne d'Ete,
Duchesse d'Angouleme,
Lou se Bonne,
Blanch Fleur,
Beurre d'Amalis,
Chaumontel,
Windsor,
Doyenne, Gray,
Doyenne, White,
Marie Louise,
Bouquet.

My remarks in regard to the impositions practiced upon us, have been general. They relate in fact to all kinds of fruit and plants. A ready market has generally been found here, and an avidity for novelty. Th usual confidence of ignorance and inexperience has prevailed, and as in anticipated results "things to be known are inferred from things unknown." The human mind is prone to credulity—so in our purchases of plants and shrubs, whether for ornament or use, our people have been ever up to a full confidence in the representations of venders, whether those venders were the slick-tongued sons of France, or our own equally shrewd but rough countrymen of yankee land. S. B. North. *Mobile, Oct.* '48.

Productiveness of Strawberries.

In all the great strawberry controversy, about staminate and pistillate, monœcious and diœcious plants, the very important item of determining the productiveness of each variety, by actual experiment, and under the proper culture, seems to have been nearly forgotten. A correspondent of the Horticulturist at Poughkeepsie, furnishes nearly the only statement we have lately seen on this subject, although even this is somewhat indefinite. The soil was a heavy loam, without limestone; it was a heavy sod, broken up in 1845, not highly manured, and planted in the spring of 1846, with *Large Early Scarlet*, *Hudson Bay*, *Bishop's* and *Hovey's Seedling*. The result shows the Large Early Scarlet to be the best bearer, the Hudson next, Bishop's next, and Hovey's far behind the others. After trying the latter in various ways; he has never seen them bear one-fourth as much as the Large Early Scarlet.

Experiments elsewhere, and especially further south, have shown great productiveness in Hovey's Seedling. But in the State of New-York we have never seen any variety equal to the Large early Scarlet. M. G. Warner, of Rochester, famed for his success with strawberries, has found this more productive than any old sort, but is not sure that it may not be excelled by Burr's New Pine.

There is no doubt that the same treatment, which is best for one variety, may not be just the thing for another, and soil and climate may also exert controlling influences. In the midst of all the surfeit of discussion, we are starving for experiments, intelligently conducted, to exhibit the precise relative productiveness, by accurate measurement, of the different varieties, under the various influences of climate, soil, and culture.

Horticultural Facts,

Condensed from the Horticulturist and other sources.

Large Horse-chestnut Trees.—One tree in Lincoln, is 59 feet high, and the diameter of the head 100 feet. Another in Warwick, a hundred years after planting, was 70 feet high, diameter of foliage, 103 feet, diameter of the trunk at the ground, 7 feet. Two others, near Preebles, in Tweeddale, within 12 feet of each other, support one rounded mass of foliage 96 feet in diameter—their ages nearly 200 years. One near London, is about 100 feet high. One at Twizell, 18 years planted, was 38 feet high, and 15 inches in diameter. The supposed largest in America, is at Yonkers, N. Y., nearly 200 years old, 65 feet high.

Manuring Old Pear Trees.—A cultivator in Bucks county, Pa., mentions the case of an old and exhausted tree of the Seckel, (which needs and will bear more manure than most pears,) the fruit from which was so small as not to be worth gathering.

A trench three feet wide and sixteen inches deep was dug round the tree, at a distance of four feet from the tree to the nearest part of the trench, thus leaving an undug mass of roots eight feet in diameter. The earth from the trench was carted away, and was replaced with a peck of bone-dust, four cart-loads of stable manure, and enough fresh soil to fill the trench.

The roots soon shot into the new soil, the tree grew rapidly, was clothed in dense foliage, and the next year it bore a large crop of full-sized and delicious fruit; and the next or present year, they were still larger.

The Pratt Pear.—This new American variety is rated by A. J. Downing as among the twenty best yet known.

Experiments.—The London Horticultural Society has adopted the practice of trying "every experiment, however ludicrous, that has been so brought forward as to excite public attention; that an official report may be published of its fallacy, instead of denouncing it without trial, which often strengthens sinister schemes, —or reporting its success if it turns out well, on authority which cannot be questioned."

A Great Nursery.—Perhaps the largest nursery in the world, is Booth's in Holstein, one of the Danish provinces. It consists of 180 acres, and requires on an average, 130 men and 20 women, to cultivate it. Eighty packers are employed during the packing season. The average profit, for the last thirty years, has been $15,000 annually, though at one time for twelve years, the sale of dahlias alone netted $50,000 per annum, and to which eleven acres are still devoted. Some rare Orchideous plants sell for $300 each. Of this family of plants, they have 2000 varieties, and 2000 of the Dahlia. The collection of ornamental trees is enormous.

Peaches in the South.—M. W. Phillipps, of Edwards, Miss., states the following periods of the ripening of early peaches:—

"Early White Nutmeg,........	June 1st.
Early Tillotson,.............	" 20th.
Early York, ("true,")	" 21st.
Cole's Early Red,...........	" 24th.
Early Red Rareripe,.........	" 26th.
President,..................	" 30th.
Snow,......................	July 1st."

Thus it appears, only 10 days elapsed from the ripening of the the Tillotsen to that of the President; in Western New-York that period is lengthened to more than a month. At Vicksburgh, the early peaches ripen two weeks earlier than at Edwards.

The London Horticultural Society, is the richest corporation of the kind in the world. Its assets, over £48,000; debt, £9,000; annual income, £6,091, ($30,000;) expenses, £5,294. It publishes quarterly transactions, and maintains one or two botanical travellers; and at last summer's exhibition, nearly 14,000 visitors were admitted by tickets of about a dollar each.

Raspberries.—S. A. Barrett, of Milton, N. Y., asserts that "a strong, deep loam, with but little sand, is the *only* soil from which a full crop is to be expected *every season*, from the Red Antwerp." He also states that N. Hallock, of that place, produced a crop the past season, from three quarters of an acre, which sold for $330, in the New-York market.

Perpetual Roses.—A correspondent of the *Horticulturist* says, "The way I pursue, is to pinch out, as soon as visible, every blossom bud that appears at the first crop, say from the middle of May till the middle of June. This reserves the strength of the plant for the after bloom; and accordingly I have such clusters of roses in July, August, September and October, as those who have not tried this stopping system can have no idea of. *La Reine*, *Madame Laffay*, *Compte de Paris*, and *Dutchess of Sutherland*, are particularly superb under this treatment.

Fire Blight and Iron.—The apparently capricious nature of fire blight, renders single cases of very little weight for or against a theory; but single cases are interesting, and form parts of a whole. M. B. Bateham, of the *Ohio Cultivator*, states that a number of large pear trees, 25 or 30 years old, in Mahoning county, were, about five years ago, struck with fire-blight, and in two years were apparently ruined. Several barrow-loads of *bog iron ore* from the neighborhood, were then placed round each tree. The following spring, new shoots appeared with great vigor, and the leaves assumed a deep green and healthy appearance, ultimately forming new tops.

PRUNING REMOVED TREES.—Many experiments have shown the value of shortening in the heads of transplanted trees—the following, from a correspondent of the *Prairie Farmer*, furnishes decided proof:—One instance out of many,—a cherry tree was transplanted after the leaves had appeared; they fell off, but by watering they re-appeared. But early in summer they turned yellow, and began again to fall. The top was then *all* cut off, leaving a single rod or stem, and the wounds were covered with grafting wax. It shot out new branches and flourished finely. We have known small trees successfully removed after making some inches of growth, by keeping the roots well immersed in *mud*, accompanied with a *very heavy pruning* of the parts above ground.

FRUIT IN ORANGE COUNTY, N. Y.—J. J. MONELL, Esq., in his address before the Agricultural Society of his county, states that Mr. DUBOIS and his sons, of Cornwall, have sold in one year, $1,500 worth of plums which grew on trees planted by the sides of their fences. It is also stated that they sold last year 500 baskets of peaches from an orchard of two acres—though only half of the trees bore. JOHN MCKIBBEN, of the same place, it is said, picked in 1846, 540 barrels of apples from six acres of land; and GEO. BRUNDAGE is said to have sold, this year, over 100 barrels of plums. The whole amount of plums sent from the town this year; is said to be upwards of 1200 barrels—yielding a profit of $6,000 to $10,000.

Farming at the North.

A subscriber at Beaufort, S. C., who wishes to settle "on a northern farm," sends us the following queries. Our answers to them must necessarily be rather indefinite—perhaps some one will be able to furnish the information called for, in a more detailed form.

"1. What amount of money will it require in a good farming district in New-York or Pennsylvania, to purchase 250 acres of land, one-fifth wood-land? (*a*)

"2. What would be the probable cost of constructing the buildings *necessary* for a farm of that size, in the best manner, not including the dwelling-house? (*b*)

"3. What number of permanent hands would it require? the amount of wages by the year and by the day? (*c*)

"4. What amount of interest upon the investment, with good management, can be obtained?" (*d*)

a. The cost of land in the states referred to, would probably be from ten to fifty dollars an acre, according to the location and quality of the soil.

b. The expense of erecting buildings will depend on the views of the owner, and the course of farming to be pursued. It is the practice in some neighborhoods to stack all the hay and grain, and only put up cheap shelters, such as sheds for the stock. From $1,000 to $2,500 would probably provide as good buildings, exclusive of the dwelling—as are usually found on farms of the size mentioned; but many farmers *begin* with not more than $500 cost of out-buildings.

c. The number of hands required will depend much on the kind of farming that is carried on, and the amount of labor to be expended in improvements, &c. A stock farm, where the land is kept chiefly in grass, will of course, require less hands than one devoted to tillage crops; so that without more knowledge of the plan to be pursued, it would be impossible to lay down any definite rule. Mr. DELAFIELD, near Geneva, in this state, who received the first premium on farms from the State Ag. Society, last year, has 120 acres of tillage annually, the cultivable part of the farm being 270 acres, thus—40 acres of wheat, 38 of barley, 17 of oats, 23 of Indian corn, 2 of potatoes—and he employs five hands by the year, and five more during the season of cultivating and securing crops. Wages are from ten to fifteen dollars a month by the year, and fifty to seventy-five cents a day, exclusive of board.

d. Seven per cent. would be considered a good interest on the investment. A few farms give more, but many less.

The following statement of PETER CRISPELL, Jr. of Ulster county, who received the second premium on farms in this state last year, may give a useful idea in connexion with this matter. The farm consists of 114 acres, exclusive of wood land:

Farm expenses from December 1st, 1846 to December 1st., 1847.

To paid hired man by year (deducting lost time)	$86	66
" 50 days work from April 1st to July 1st (by one man,)	25	00
" 18 do. Hoeing and planting corn,..	9	00
" 159¼ do. Harvesting,	145	31
" 89 do. Cutting up and husking corn.	44	50
" 3 Months work after harvest,	30	00
" 8 Months work by hired boy,	48	00
" 8 do. by son aged 15 years (worth)	40	00
" Hand help in house,	27	12
" Blacksmith und wagon repairs,	43	73
" Merchandize and groceries,	172	29
" 1000 bushels ashes,	110	00
" 2 bushels clover seed,	11	00
" 3000 ft. hemlock boards (at mill)	16	87
" Taxes, Town, School, &c. (about)	50	00
	$849	48

Amount of Crops sold and to be sold.

532 bushels of oats (sold)	$266	00
300 do rye (mostly sold)	258	00
900 do corn (to be sold) at 75 cts.,	675	00
22 do wheat, (sold) at $1.75	38	50
8¼ do flaxseed (sold)	10	31
100 lb. flax, (to be sold)	10	00
About 50 tons of hay (partly sold)	500	00
160 bushels potatoes (partly sold) at 50 cents,	80	00
Beef, hide, &c.,	18	80
Pork sold,	17	28
Calves and skins sold,	10	40
About 600 lbs. butter, at 20 cents (sold)	120	00
2940 Eggs, (sold at)	29	21
Straw to be sold for more than $100,	100	00
10 loads cornstalks (partly sold)	20	00
	$2153	50
Deduct expenses,	849	48
	$1304	02

In regard to the above account, Mr. CRISPELL adds: "In the above I have included all the labor on the farm and in the family, except what has been performed by myself in harvest, and in husking, that being the only labor performed by myself, and the labor of my wife and daughter in the house. There are some other family expenses which I do not consider farm expenses, but which are to be paid out of the avails of the farm, such as shoemakers, weavers, tailors, &c., bills. My shoemaker's bill for the same time, amounts to $26.65, paid for weaving, $9.60; paid for making clothing and other wearing apparel, $8.25; for newspapers taken, $14, for minister's salary, $25, amounting in all to $83.60. This, I believe, will include all the ordinary expenses of the family and farm."

CONSTRUCTION OF SCHOOL-HOUSES.

We once heard a distinguished traveling lecturer on education, assert that he could at once know a district school-house from any other building, by its being the *worst-looking* house in the neighborhood. Broken windows and broken walls, and a general air of desolation, have in many cases been the leading features. If children are to be taught the knowledge of order and comfort, these are miserable examples to set before them. In strong contrast with such pictures, is one described by Downing, a building erected for a *free-school*, by a private gentleman in Dutchess county, as an example for a district school. "It was a building simple enough, after all. A projecting roof, with slightly ornamented brackets, a pretty porch, neat chimney tops; its color a soft, neutral tint; these were its leading features. But a single glance at it, told in a moment, that *the evil spirit had been cast out*, and the good spirit had taken its place. The utmost neatness and cleanliness appeared in every part. Beautiful vines and creepers climbed upon the walls, and hung in festoons over the windows. Groups of trees and flowering shrubs, were thriving within its enclosure. A bit of neat lawn surrounded the building, and was evidently an object of care and respect with the pupils themselves." Such an example before children could hardly fail to exert a controling influence, to continue through after life.

The accompanying engravings are from a work lately published on School Architecture, and the Improvement of School-Houses in the United States; by Henry Barnard, Commissioner of Schools in Rhode Island. They were designed by Mr. Teft, an architect who appears to comprehend the art of combining convenience with tastefulness and beauty, in structures of this kind. The buildings here represented are erected, one at North Providence, the other at Westerly, R. I.

We have not yet met with the volume above alluded to, and therefore take the following from a notice by the editor of the *Horticulturist*. After speaking of the various plans for all sizes of school-houses, "primary, district, grammar, intermediate, public, or high, and normal schools," it is observed:—

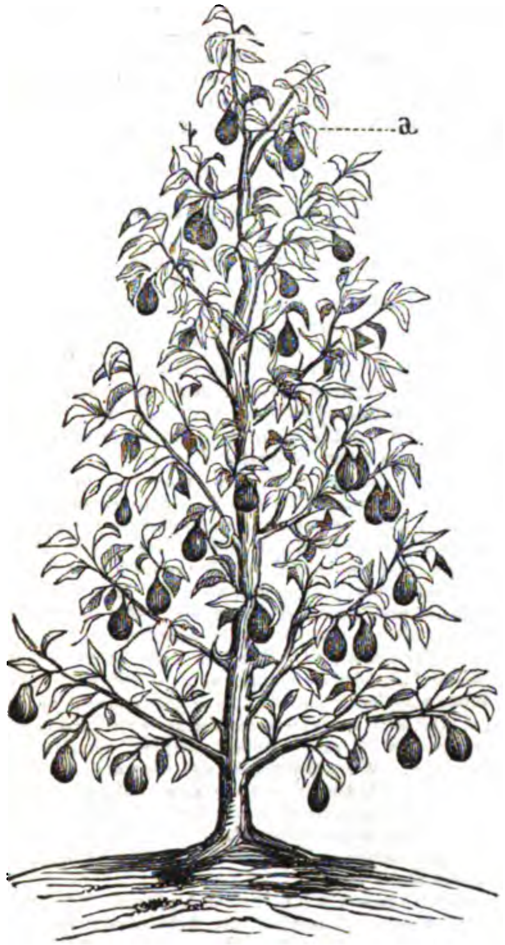
"But these plans, numerous as they are, constitute but a small part of the utility of the work. What gratifies us quite as much, or even more, is the pains taken by the author to point out and suggest remedies for some of the crying evils in almost all the common schools at present existing,—evils which exert a most injurious influence on the health and minds of pupils.

"We allude especially to improved modes of *ventilation*, *warming*, and *seating* the inmates of common school-houses. A want of proper attention to the two first most important considerations is the cause of a great deal of bodily discomfort; and we have the opinion of some of the most skilful physicians of the country, for believing that a large number of the spinal distortions of late so prevalent, owe their origin to the cramped and unsuitable seats and writing desks, to which the tender frames of pupils are confined in schools.

"To assist in banishing these evils, Mr. Barnard has not only very lucidly explained the advantages of proper ventilation, but he gives diagrams and details, showing how the Boston mode of ventilation, (a most excellent one) is easily applied to all school-houses, so as effectually to prevent the possibility of the accumulation of deleterious or impure air.

"In speaking of the accommodations in primary schools, we find the following, among other valuable hints for the teacher's own use:—

'Little children are made to suffer, and many of them permanently, from being forced to sit long in one position, without any occupation for mind or muscles, on seats without backs, and so high that their feet cannot touch, much less rest on the floor. Nothing but the fear of punishment, or its frequent application, can keep a live child still under such circumstances, and even that cannot do it long. Who has not an aching remembrance of the torture of this unnatural confinement, and the burning sense of injustice, for punishment inflicted for some unavoidable manifestation of uneasiness and pain? Even though the seats are as comfortable as can be made, young children cannot and should not be kept still upon them long at a time, and never without something innocent or useful to do; and under no circumstances longer than twenty-five or thirty minutes in one position, nor so long at one study, and that with frequent and free exercise in the open air. To accomplish this, great and radical changes in the views and practice of teachers, parents, and the community at large must take place. Nowhere, in the whole department of practical education, is a gradual change more needed, or should sooner be commenced.' "



Conical Dwarf Pear Tree.

This form of training pear trees has been deemed, by some experienced cultivators, to give the greatest quantity and best quality of fruit. Downing suggests that the best way to grow trees in this form, is to choose a tree of but one year's growth, from the graft, as older trees are apt to be bare of branches at the lower part of their stems. The leading shoot of the young tree is to be shortened back to within a foot or eighteen inches of the ground, at the time of planting it. This will develope the lower branches; to encourage the growth of which still more, it is well to shorten back the leading shoot, about the first of July. This will, about the middle of the growth the next spring, cause to start out another tier of branches, a foot above the last. The next summer, in July, the leader is again cut back to within a foot of the last tier, which will cause the growth of a third set, and this must be repeated every year till the tree is from 6 to 10 feet high, as the taste of the cultivator may direct. It is considered better to pinch off the ends of such side-shoots as are inclined to grow too long, than to prune them.

Spirea Prunifolia.

This beautiful shrub, which was introduced into Europe by Dr. Siebold, is thus described. It was found cultivated in the Japanese gardens, and is supposed to be a native of the north of China. It is from 6 to 9 feet high, and has upright, close, bushy, slender branches, which are covered with a smooth, ash-colored bark; that detaches itself at a later period in thin scales. The leaves are oval, or ovate-elliptic, rounded at their base, obtuse, or a little acute at their apex, downy beneath, denticulated at the edge. The flowers, which grow by threes or sixes, cover the whole length of the branches, are as white as snow, and very double, in consequence of a complete abortion of their stamens. Their shape is exactly like that of the Ranunculus aconitifolius, with double flowers, and their number and arrangement, together with a light and elegant bright green foliage, render this plant a charming addition to the plants which grow in the open air.

Domestic Economy, Recipes, &c.

Curing Provisions.

As this is the season of the year when farmers are engaged in packing their stores of meat, we offer the following recipes, the value of which we have proved by our own experience.

Hams.—The following mode of preparing hams, we have practiced for several years, and can with confidence recommend it to others.

For every one hundred pounds of meat, take five pints of good molasses, (or five pounds brown sugar,) five ounces saltpetre, and eight pounds rock salt—add three gallons of water, and boil the ingredients over a gentle fire, skimming off the froth or scum as it rises. Continue the boiling till the salt, &c. is dissolved. Have the hams nicely cut and trimmed, packed in casks with the shank end down, as the pickle will thus strike in better. When the pickle, prepared as above, is sufficiently cool, pour it over the hams. They may lie in pickle from two to six weeks, according to the size of the pieces, or the state of the weather, more time being required in cold, than in warm weather. Beef or mutton hams, intended for smoking and drying, may be cured according to this mode, and will be found excellent.

Much of the goodness of hams depends on smoking. They should be hung at such a distance from the fire, as not to be heated. They should also be hung up with the shank end downward, as this will prevent the escape of their juices by dripping. Small hams, wanted for immediate use, will answer with two weeks' smoking, but larger ones, and those wanted for keeping, should be smoked four weeks or more.

Different articles are used for smoking. Perhaps saw-dust from hard wood, where it can be conveniently had, is on the whole to be preferred. Corn cobs are first rate, and are said by some to make the "sweetest" smoke of anything. Chips of maple and hickory, or the small twigs and branches of those kinds of wood, do well.

Hams are sometimes cured by adding pyroligneous acid to the pickle, but having had no experience with this mode, we cannot speak of its advantages. Another mode, which we have seen practiced, is to *smoke the barrels or casks* in which the hams are to be kept, and let them remain in pickle till wanted, only taking them out a sufficiently long time before using, to allow them to drain properly. The barrels are smoked by being placed over small fires of chips, cobs, &c. for several hours. The essence of smoke which is thus imbibed by the barrel, is imparted to the pickle, and thence to the meat.

Westphalia Hams.—The following compound will give to any common ham the taste so much appreciated in that sold as Westphalia, and is recommended to them who prefer that flavor. In one hundred parts of water dissolve four parts of salt, two parts of brown sugar, one part Barbadoes tar, and one part spirits of wine. After it has been well mixed and stood for several days, three tablespoonfuls may be mixed with the salt necessary to cure an ordinary ham.

Beef.—The best pieces for corning, are the plates, ribs and briskets. Pack the pieces in casks, giving a very slight sprinkling of salt between each piece. Then cover the meat with a pickle made by boiling together, in 4 gallons of water, 8 lbs. salt, 3 lbs. brown sugar, 3 oz. saltpetre, 1 oz. pearlash, for 100 lbs. meat. Keep a heavy flat stone on the meat, that it may be well immersed in the pickle. Beef packed in this manner will keep a year, and will rather improve than grow worse.

Another mode recommended by a gentleman of long experience in the packing of beef and pork, is the following: For 100 lbs. beef take 4 lbs. brown sugar, 4 oz. saltpetre, and 4 quarts fine Liverpool salt, mix all intimately together, and in packing, sprinkle it evenly over the meat. Add no pickle, the dissolving of the salt, &c. with the juices of the meat, will be sufficient. Keep the meat closely pressed together by a good weight. We are assured that this is the best mode of packing beef that is intended for keeping over the summer, and that the quality of the meat is unexceptionably fine.

Clear Pork.—For this we prefer clear salt and water. After having divided the hog, take off the shoulders and hams, and all the lean meat, cut the sides crosswise into strips, four or five inches wide, and after covering the bottom of the cask with salt, pack the strips in layers set edgwise as closely as possible round the cask, with plenty of salt between each layer. When the cask is full and has settled for a day or two, put in cold water enough to fairly cover the pork. There is no danger of using too much salt for clear pork—no more will be taken up by the meat than is needed, and the remainder is safely left, and may be used in packing a new parcel.

Gather up the Fragments.

Families who kill their own beef and pork, always have various odds and ends which may be worked up in such a way as to form some of the most wholesome and palatable dishes.

Tripe.—Take the tripe as soon as practicable after it comes from the animal, rinse it well in cold water, and immediately sprinkle a thick coating of air-slacked lime over the inside—roll it up and let it lie till the next day. Then cut it in pieces eight or ten inches square, scrape it, and put in soak in salt and water, where it should remain seven or eight days, or till the strong smell is entirely gone, changing the salt and water every day. Then boil it tender. It may be soused like pigs' feet, or it may be broiled, fried with sausages, or dipped in batter and fried alone.

Souse.—Take pigs' feet, the head, &c., and after bieng well cleaned, boil them in water with a little salt, till the meat drops off. Then slip out the largest bones, and put the meat in a stone jar, or well-seasoned wood firkin. Make a liquor to cover them, as follows: Take one quart of the liquor they were boiled in, two quarts of vinegar, spiced with cloves, allspice, pepper, and cinnamon. While the meat is still warm, pour the liquor, boiling hot, upon it. In a few days it is fit for use, and may be either rolled in flour and fried in lard or sausage fat, or warmed in a little of the liquor, or eaten cold. The feet and shanks of *cattle*, cleansed in the same manner as pigs' feet, are excellent. When sufficiently boiled, all the bones should be taken out, the meat and sinews immediately chopped fine, and seasoned with salt, pepper, allspice, summer-savory and sage. When wanted for use, they may be warmed over in a little butter, and are nice, delicate eating—scarce inferior to oysters, which they somewhat resembles. They make equally as good souse as pigs' feet. The jelly which is left after they are boiled, makes excellent *blanc mange*.

Sausages.—Chop 6 lbs. of lean with 2 lbs. of fat pork, 4 table-spoonsful of salt, 6 do. of powdered sage, 4 of black pepper, and 2 of cloves—a litttle rosemary may be added. If not stuffed, keep the meat in a tin vessel, tied down close; and when to be used roll it into cakes, dust them with flour, and fry.

Pickled Cabbages.—Take the heads of red cabbage, and quarter them. Then pack them in a cask or stone ware vessel, giving each layer a good sprinkling of salt, and place some weight on them. After remaining about a week, prepare some vinegar by adding to each gallon one ounce each of mace, cinnamon, and black pepper, and a small bit of alum. Heat the vinegar scalding hot and pour over the cabbage. When cool, tie over or cover the top of the vessel, so as to keep the contents from the air as much as possible.—*Morgan Chronicle.*

Notices of New Publications.

Breeds, Management, Structure and Diseases of the Sheep: with illustrative engravings, and an Appendix. By **Henry J. Canfield**, of Canfield, Mahoning County, Ohio.

This is a volume of 395 pages duodecimo. In that part of the work relating to the natural history and breeds of sheep, the author appears to have followed Youatt, Spooner, and others, and this is also the case in a considerable degree in regard to diseases, and management. In reference to diseases, however, the author has in several instances given his own ideas, which he states have been formed from the results of experience, and much study of the subject. He is of the opinion that the disease called the *rot* has been the cause of greater loss in sheep than has generally been believed—greater, perhaps, than any other disease. This is a conclusion which will probably be admitted by most persons who have given the matter much consideration. The means of prevention and the remedy proposed for this disease are in some respects new, and should be carefully considered. He thinks the immediate cause of the disease commonly known as rot, is "the acids which are produced by the fermentation of food in the stomach." The remote cause is the deficiency of earthy salts in the food. Grass or herbage of much succulence is of this nature. The disease and treatment are described as follows:

"In the *rot* or *gradual decay of the bowels*, there is a chronic inflammation of the mucous membranes of some part or parts of the intestinal tube, which is frequently not very severe; the tongue, though furred, may show little or no sign of inflammation, and, at the same time, the lacteal ducts and mesentery glands are gradually decaying, in consequence of this inflammation; nutriment cannot pass into the lacteal ducts through the inflamed parts, nor through those parts which are injured by abscesses, and, consequently, the sheep pines away by degrees. This is, properly speaking, the rot; it is very similar to the dyspepsia of man, and the complication of diseases which ensues, is the result of this indigestion.

Treatment of the Rot.—When man is afflicted with chronic inflammation of the mucous membranes of the bowels in this manner, it has been found that mineral water, which is strongly impregnated with gypsum, (Plaster of Paris,) is one of the best remedies for this complaint; and mankind are seldom afflicted with dysentery in those districts where the waters are made hard by gypsum; and most hard waters are of this description: and dysentery is an acute inflammation of the mucus membranes of the lower parts of the bowels; and it is only when lime and gypsum are deficient in upland grasses, that graminivorous animals, feeding upon them, are afflicted with inflammations of the mucus membranes of the bowels. The reason for this effect appears to be, that inflammation is the beginning of decomposition; gypsum is the natural astringent of the bowels both to man and beast, and its powerful antiseptic qualities arrest the decomposition which begins in the parts inflamed, and nature restores them to a healthy action.

"Therefore, when the bowels of sheep are more or less decayed, nothing better can be done for them than to give them a full proportion of gypsum and lime in their condiments, and a suitable proportion of tar or pitch along with them; and if any one does not incline to eat ashes and gypsum, a cleaner mixture may be made with one part slacked lime or chalk, two parts gypsum, and two or three parts common salt: such a mixture will not be refused.

"In winter, sheep, whose bowels are in any wise decayed, should be kept warm and dry, and should be provided with a supply of well-cured hay, and a moderate supply of grain: but special care should be used not to feed them so much as to scour them.

"This course will, in most cases, arrest the disease, and prevent any further decay of the lacteal ducts and mesentery glands, and will take away all diseased action, so that such animals may, with propriety, be fattened and eaten, in all cases where they can be made fat: but it is seldom that medicine can restore them to their original sound state, when their bowels are much decayed."

Under the head of "Condiments," the mixture alluded to is more particularly described thus:

"I have used ten parts leached ashes, one part gypsum, and two or three parts common salt, in wet seasons; at other times, one-third salt, and the balance in gypsum and ashes. Others can mix these articles, as they find necessary by experiment. For each one hundred sheep, two to four pounds of pitch pulverized, and mixed with these articles monthly, will be sufficient in most cases, to prevent dropsy, and affections of the lungs. The various condiments should be rightly proportioned. If the alkalies and alkaline salts superabound, they will be injurious by causing too great relaxation; but if the earthy condiments superabound, they will pass through the bowels harmlessly.

"Where ashes cannot be conveniently obtained, two parts slacked lime or chalk, one part gypsum, and one or two parts of common salt, may be mixed together, and used advantageously for the same purpose; and, if convenient, one part burnt clay may be pulverized, and usefully mixed with these ingredients, along with bitter articles. The quantity which sheep will eat weekly varies; sometimes a hundred sheep will eat, in one week, a bushel of salt, ashes and gypsum, mixed in proportion as first mentioned: at other times the same amount will suffice them for three or four weeks. The quantity of ashes and gypsum, which they seem to require, evidently depends upon the quality of the grass or hay.

"Perfect digestion is the great source of health to all animals, and, therefore, particular attention should be paid to supply the condiments which may be necessary for them; and when they are supplied, their digestion will generally be very perfect, and a less quantity of food will suffice them, than if they are withheld.

"In order to test the properties of gypsum, I fed one part gypsum, and two parts common salt to sheep and cattle. In the softest and rankest pastures, all diarrhœ of sheep was entirely prevented. Its effect upon calves and fatting cattle was particularly excellent. Gypsum mixed with salt or with provender is also very useful to horses afflicted with slavering, or the heaves."

American Journal of Science and Arts.—The November number of this work is before us. It contains a large amount of scientific matter, as well as several articles interesting to the popular reader. We notice one by Prof. **Henry**, giving explanations and illustrations of the plan of the Smithsonian Institute; Report on Meteorites, by Prof. C. U. **Shepard**; Notes on the Mines of a portion of the State of Mexico, by Lieut. G. W. **Raines**; Structure of the Jaws and Teeth of the Iguandon, by Dr. **Mantell**; Shooting stars of August 10, 1848; Electricity as applied to Telegraphic purposes; The Dead Sea Expedition; Aretic Expedition in search of Sir John Franklin, &c., &c. The value of this work renders it deserving of the patronage of the public. Published at New Haven on the first day of every second month, at $5 per year. Edited by Messrs. SILLIMAN & DANA.

OBSERVATIONS on the Production, Manufacture, Transportation and Preservation of the CEREAL GRAINS. By J. R. STAFFORD.

This pamphlet is chiefly devoted to stating the advantages of preserving grain, meal and flour in all climates, and to an explanation of the operation of a machine called Stafford's Patent Revolving Dryer and Cooler. We have noticed the invention on former occasions, and have since received favorable accounts of it. The patentee claims for this dryer the following advantages:

1. That it dries all substances without the possibility of change of quality, color or flavor.
2. That it occupies less space, takes less fuel, and does more work than any other dryer.
3. The only attention required is to keep up steam sufficient to blow off at the valve weighed at any desired pressure.
4. That the motion and the heat being uniform, with sufficient capacity of dryer, a given amount of grain or other substances must be dried, without destroying their vitality.

THIRTEEN LECTURES, on a new Self-supporting System of General and Liberal Education. By EZEKIEL RICH, Minister of the Gospel and an Educator.

This is a little book of 224 pages duodecimo, designed to show the views of the author in regard to a reform in writing the English language—a subject to which he has devoted much time and attention.

"THE AMERICAN FLORA, illustrated with four to six beautiful colored engravings, taken from Nature," edited by Dr. A. B. STRONG, and published by Green & Spencer, 140 Nassau street, New York. This work is issued monthly, in demi-quarto form, each No. containing four to six plates, with 16 pages of superior letter press. The October No. has four colored plates, viz. The Moss Rose, Sanguinaria Canadensis, Lupinus perennis, and Pear. Terms—$3 a year.

ILLUSTRATED NATURAL HISTORY, by the same editor, and published monthly, at $1 a year. The October No. has four lithographic plates of animals and birds, which are worth the price of the number.

Profits of Fowls.

LYMAN CHURCH, of Middlefield, Mass., states that he has derived a nett profit of $108 19-100 in one year, from 140 fowls. He submits his account, as follows:

Value of stock, Nov. 1, 1847,..............	$40 35
Expense of feed,..........................	116 45
	$156 80
Value of stock, Oct. 1848,....	$65 30
" of Poultry sold,......................	30 68
" of Manure, 63 bu., 15 cts............	9 45
" of Eggs, 1,256 doz., 13 1-2 cts.,.....	169 56
	$264 99

He states that he arrives at this result by actual and careful experiment, without guessing or conjecture. We extract from his communication, in the *Hampshire Gazette*, the following in relation to the treatment of his follows: "I give them a warm house, with a comfortable yard or range, and 150 hens should have from one-half to three quarters of an acre. My house is so arranged as to keep them when I choose, in separate apartments and constantly supplied with food, old plastering, lime, gravel, water, &c.,—with some secret nests, as well as open boxes, for them to lay in. The house should be kept well white-washed and as clean as possible. The kind of food I use is varied occasionally,—corn, boiled potatoes, barley, oats and wheat screenings; the latter especially I find very valuable. The quality of the food, however, does not, in my opinion, influence the laying so much as is imagined. They must have enough to eat, and be made comfortable in other respects. With my management they lay the year round."

Characteristics of the Season 1848.

In this latitude, any show of vegetation before the 2d spring months, is always regarded as premature; hence the adage that "all the grass which grows in March will die in April." In fact it is not, usually, till the near approach of May that the greenness of the fields and forests becomes fairly conspicuous.

April last, exhibited nothing to excite particular remark, except that the month was very dry. May commenced with abundant rain, which suddenly clothed the trees with foliage of unusual richness. From the middle of this month till the middle of June, the weather was generally cold and wet; but it then became warm and all crops rapidly advanced in growth. Up to the latter part of July, almost all parts of the country were well supplied with moisture. After that period, however, many sections were visited by drouth. A belt of country extending from the Allegany range to the eastward, embracing some of the southern counties of this State, the northern part of New Jersey, and a considerable portion of Connecticut, has suffered severely from this cause.

The average degree of heat for the season has been less than usual—the number of *hot* days comparatively few, and the period of warm weather extremely short. There was frost in many places on the first of June, and in particular spots on the thirteenth, and by the first week in September its effects might again be seen. September and October were chilly and damp—there being but few fair days.

Hay gave a full crop, and the growth of grass was generally good in all parts of the country, during the early part of the season.

Wheat gave a full average yield in most sections, though in some neighborhoods the crop was damaged by wet weather after it was cut.

Rye was generally a full yield, and of good quality.

Barley did not yield as well as usual in the central portions of the state, where it is cultivated extensively, but in some other sections the crop was fine.

Oats are generally heavy, though with rather a disproportion of straw.

Indian Corn, that important article for home consumption, and which is becoming every year more valuable for exportation, has been good—except in the colder and more northern parts of the country, where, in some instances, it failed to ripen fully. But taking the whole country together, the crop has never done better, and the quantity produced must be unprecedented. The best processes of kiln-drying this grain are coming into use, by which we are enabled to send it to foreign ports in good order, and it can be brought from the interior of our country, where it is raised at a cheap rate.

Potatoes have been less injured by the "disease" or rot, than for the last three or four years. The crop was more or less effected about the first August, and in some instances suffered to the amount of fifty per cent or more. The general yield, however, was light—in many places not half an average—even where the tubers have shown no symptoms of decay. Our accounts from Europe represent the disease as less virulent, generally, than in former years. In England and Scotland, the crop is decidedly better than that of 1847, and in Ireland the destruction has been less, except in a few districts.

Of *fruits* there was an entire failure, in this vicinity, of cherries, plums, and peaches, occasioned, as is believed, by the starting of the buds in the fall, and the sudden occurrence of extreme cold in February. A hundred miles farther south, however, the stone fruits were generally good, and in New Jersey and Delaware peaches were never more plenty. Apples are plenty and good. Pears in this vicinity, were not as good as usual. The trees have suffered greatly from blight—the cause of which is yet veiled in some mystery.

But in view of all the products of the season, the American husbandman has abundant reason to be satisfied. In all the essential articles of subsistence, the earth has yielded a bountiful increase. No dread of famine disturbs the minds of any of our people, but from all quarters we hear the joyous intelligence, that there is "bread enough and to spare."

Hints for the Season.

Operations on the farm are usually suspended, in this latitude, by the first of December; though as long as the ground continues open, something may be done Stones may be dug, walls built, drains made, ground plowed, and materials for manure collected. When the ground has frozen, and a light coating of snow has fallen, a good opportunity is presented for moving wood. timber and other articles, taking produce to market, &c., business which may be done with much greater facility now than when the roads become blocked with deep snows.

Live stock may be allowed to graze such fields as have not been already sufficiently depastured, as long as the ground is bare; but cattle should not be permitted to run on soils that are so soft as to be poached by their hoofs. They will need shelter at night, and in stormy weather. Dry lands, that have a coat of grass reserved on them, may be fed by sheep any time in the winter when not covered with snow.

In the distribution of the winter's supply of fodder, the coarser and poorer kinds should be reserved till the coldest weather—the appetites of the animals being then sharpest, it will be eaten with least waste. Those farmers who are not already provided with cutting machines, will do well to procure them. Their use is attended with considerable economy. Coarse hay, straw, or corn-stalks, are, by being passed through a cutter, brought into a more convenient form for mastication, and substances are eaten which would otherwise be rejected, or only partially consumed. Cutting affords an opportunity for mixing fodder of inferior quality with that which is more palatable, thus inducing the stock to eat that which would not be eaten if given by itself. Cutting also affords the most convenient means of mixing meal, shorts or bran with fodder, by which the double advantage is gained of consuming articles which would otherwise be more or less wasted, and of so diffusing the meal that its nutriment is thoroughly extracted by the animal. The feeding of laboring animals on cut food allows them more time to rest—the cutting performing, in a great degree, the work of chewing and preparation for digestion. But it should not be attempted to feed stock with substances which are chiefly destitute of nutriment. The large sour butts of corn stalks are little else than woody fibre, and can be of little or no use in supporting animal life. Where a cutter is worked by horse-power, it may be an object to cut such articles on account of the convenience of working them into manure.

Attention should be given to keeping all animals, as much as possible, in a condition congenial to their habits. Their comfort should be consulted in regard to both food and shelter. Undue exposure to cold, not only requires a greater amount of food to sustain the system, but it prevents the natural secretions, and actually wastes the bodily tissues. The most proper temperature is that which would be naturally sought by the animal. Sheep may be allowed to take shelter or not, at their option, and this liberty may be given to all stock, which it is not necessary to fasten in stables a portion of the time. Close quarters are probably preferable for animals which it is designed to fatten, in order to prevent the loss of their flesh by muscular exercise.

We have alluded above to late plowing. There are some circumstances which may render this expedient. Land which is filled with couch grass (Triticum repens) by being plowed so as to expose the roots to the action of frost, can be much easier cleaned the following season, as the freezing of the plant in this situation greatly weakens its vitality. Tenacious soils, by being thrown into ridges in such a manner as to throw off the water, and let the surface freeze while dry, are rendered mellow and friable, and are readily brought into excellent condition for planting in spring.

Conclusion of the Season—Potato Crop,

With general remarks on the Potato.

The year 1848 will long be remembered, at least in central New-York, for its cool summer and autumn. The occurrence of a few hot days in June, connected with frequent sudden extreme changes in that month, and the first half of July, (see remarks on the season in your October No.) very seriously threatened the potato crop. But the steady, cool character of the remainder of the season, while it almost annihilated the crop of melons, squashes and pickle cucumbers, was very favorable to the potato. The yield and healthfulness of the crop this year has been superior to that of any other for four or five years. Still in cases of rich soil, and more especially in cases of late planting and tender varieties, the disease has been very fatal.

A season moderately moist, cool and steady, such as is favorable to wheat, oats and grass, will be found highly appropriate to potatoes; while one hot and dry, such as is fitted to mature corn, melons and tomatoes, will be found unfavorable. Such, however, is the great natural vigor of this plant, that it has, until lately, withstood the unnatural treatment to which we have subjected it in planting it in the same soil and climate with corn. The ancient Peruvian Indians, the earliest cultivators of this plant of whom we have any knowledge, cultivated this crop higher up on the mountain side than corn, and not corn only, but also higher up than where the Spaniards subsequently cultivated wheat and barley.

Our unnatural treatment of it, connected with our neglect to renew it frequently from vigorous healthful seed, has well nigh ruined the potato. As, however, we cannot always choose such a soil and climate as we could desire for this most valuable crop, we may still hope to succeed, as we formerly have done, by a wise selection of soil, exposition, and early planting, and especially by the renewal of our seed from vigorous sources. C. E. G. *Utica, Nov.*, 1848.

Big Sheep.—It is stated that some of the sheep exhibited at the last show of the Royal Agricultural Society, were estimated to weigh as follows: Leicesters, of 16 months old, 46 lbs. per quarter; of the same breed, 3 years and 4 months old, 56 lbs. per quarter. Long-wools, (not Leicester,) 16 months old, 52 lbs. per quarter; of the same breed, 3 years and 4 months old, 72 lbs. per quarter. South-Downs, 16 months old, 36 lbs. per quarter;—of the same breed, 3 years and 4 months old, 46 lbs. per quarter.

MONTHLY NOTICES—TO CORRESPONDENTS, &c.

WHO WANTS A COMPLETE SET OF THE CULTIVATOR, from its commencement, 15 vols. bound, and the two volumes of DOWNING'S HORTICULTURIST, now published, and TWENTY-FIVE DOLLARS worth of other books?—It will be seen by reference to an advertisement on our last page, that these are all offered as a PREMIUM to the one who sends us the largest number of subscribers to "THE CULTIVATOR," for 1849. Beside this, other PREMIUMS—of FORTY, THIRTY, TWENTY, and TEN DOLLARS, and many smaller ones, are offered for the next largest lists of subscribers. These Premiums will furnish a Farmer's Library, which any young man may well prize highly; and we hope there will be an energetic competition for them.

BACK VOLUMES.—A few complete sets of The Cultivator from its commencement, bound and stitched, were saved from destruction by the fire, and as we shall soon reprint these volumes, we are prepared to supply all orders for them

BACK NUMBERS.—*All* our back numbers, unbound, of all the volumes, were burnt—consequently we cannot supply any single numbers until they are reprinted.

RETURN OF MR. COLMAN.—Many of our readers will doubtless be glad to learn of the return of this gentleman, after having spent several years in writing and procuring materials for his work on "European Agriculture." We understand he arrived in Boston in the early part of last month.

☞ Mr. P. BARRY, of the firm of Elwanger & Barry, of the Mount Hope Gardens and Nurseries, Rochester, sailed for Europe last week, for the purpose of visiting the principal nurseries of Great Britain, France and Germany, and will bring home with him in the spring, whatever he finds, which promises to be an useful addition to their already very extensive collection of trees and plants.

GOOD CORN.—Mr. D. GAYLORD, of Gaylord's Bridge, Conn., has sent us a sample of a kind of corn raised by him. It is called the Warren corn, but is similar to the Dutton, or Golden Sioux—has twelve rows to the ear, and less cob, and better shaped ears than is usual with this variety.

☞ We have received from Mr. S. WORDEN, of Oswego, a sample of a variety of apples which he highly esteems—the name not known. It is of a handsome, round form, and deep red color. The flavor is quite peculiar, but pleasant; the flesh tender and breaking. Mr. W. recommends it for baking. We were prevented from trying it for this pourpose, as they were lost or destroyed in the fire which consumed our office.

We have also received from Mr. D. HATCH, Alstead, N. H., specimens of several kinds of apples, among which are the Pumpkin Russet, or Sweet Russet, Little Pearmain, Newtown Pippin, and a variety not known.

MINERAL PAINT.—Having had several inquiries in regard to this substance, we condense the following description of it from the *Farmer and Mechanic.* It is said to harden in a few months after its application, forming a perfect enamel or slate, imperishable and capable of resisting fire. It can be had of any color from grey to black. It is called "UTLEY'S OHIO MINERAL INDESTRUCTIBLE PAINT." It is afforded at $4 the hundred pounds. W. H. STARR, 67 Beekman street, New York, is agent for the sale of it.

APPLES FROM CAYUGA COUNTY.—Mr. WM. D. OSBORN, of Port Byron, Cayuga county, has left us specimens of the Red Bellefleur and Newton Pippin, raised by him. The Pippin is of a larger size than we have before seen of that variety.

GOOD CORN CROP.—Mr. BALL, of Nassau, informs us that he raised the past season, 86 bushels of corn per acre, on his farm, allowing 70 pounds of ears as equal to a bushel of shelled corn. The plow was not used after the ground was planted—the corn being worked with the cultivator.

IMPROVEMENT IN WORKING IRON.—Mr. HORATIO AMES, of Falls Village, Conn., who is extensively engaged in working wrought iron, has made several improvements in the business, of great importance. Noticing the tendency of iron bars to divide longitudinally, when exposed to heavy pressure, it occurred to him that by twisting them, the tendency of the particles to assume a parallel arrangement, would be prevented, and the liability to separate obviated. He has, therefore, invented an apparatus which effectually performs the work. Tire, for locomotive wheels, of which he makes a great quantity, is subjected to this process, which is found to add greatly to its strength and durability. The plan is equally applicable to the twisting of rails for railroads. Mr. A. has also invented a process for heating or melting iron from the pig, by which he makes a saving of three dollars per ton. He has, besides, made improvements in the mode of hammering iron. He has lately erected, and put in operation, a forge, the cost of which was $50,000, and is probably superior to anything of the kind in this country. The building is 150 feet long and 80 feet wide. The roof, which is of slate, is supported on 38 cast-iron posts, 15 feet long, weighing one ton each. The whole weight of cast iron used in the construction of the building, and in the fixtures for carrying on the business, is 120 tons, and the amount of wrought-iron in shafts, hammers, bolts and braces, is 60 tons. He employs 100 hands—used last year 2,500 tons of pig-iron, and produced $200,000 worth of wrought iron, in the form of tire for locomotive wheels, axletrees for cars and military carriages, shafts for steamboats, &c. With the new works, he will be able to make $1000 worth of work per day, or $300,000 per year, and with a general saving, over the former mode, of one-fifth of the expense.

☞ We understand that Mr. Z. B. WAKEMAN, of Herkimer, has lately purchased a very superior South Down ram, of F. ROTCH, Esq., of Butternuts. We noticed Mr. W.'s sheep in our account of the late show at Buffalo. We presume they will be benefitted by the purchase mentioned. We learn Mr. WAKEMAN has also purchased a Leicester boar of C. R. NICHOLS, of Darien, which received one of the premiums at the late State show.

CATTLE MEDICINES.—See advertisement of Messrs. Stimpson & Reed in this paper, for list of medicines prepared by Dr. DADD, for horses and cattle. Such an establishment, where the simplest remedies for the diseases of animals, prepared by a competent veterinary surgeon, can always be had, will be a great benefit to the farmer.

AGRICULTURAL SHOW AT FREDERICTON, N. B.—We learn that the show held at this place in October last, was in most respects superior to that of former years. Horses, sheep and swine were good, and the show of vegetables very fine. There was a plowing match on the second day, which "went off" well. We notice that our friend J. H. REID, Esq., of Fredericton, obtained prizes for horses, cattle, sheep, swine, crops and implements.

WILD POTATOES.—It will be recollected that some have recommended procuring wild potatoes for cultivation, on the supposition that they would be more likely to escape the disease. We have in a former number stated that the results of some trials last year showed the produce of wild tubers as much affected with the disease as any. We learn from the English papers that they have been tried the past season, and proved equally affected as before.

CULTURE OF WHEAT.—A discussion in relation to this subject by a farmers' club in England, resulted in the following conclusions. 1. *Preparation of the land.* The land to be well cleaned, followed by grass or clover, depastured by sheep. Plowed with a furrow eight to nine inches wide and four inches deep. Heavy land to be as light as possible at the time of sowing, and light land to be made as heavy as possible. 2. *Time of sowing and quantity of seed* to be regulated by the season and the state of the land—early in the season nine pecks per acre, and more as the season advanced. 3. *Treatment of the crop.* The crop to be kept clean, and to be rolled in the spring with one of Crosskill's clod-crushers. 4. *Time of reaping.* Early reaping—grain not allowed to get ripe before being cut. The soil to which the discussion referred was described as of a lime-stone character. It is not stated whether a subsoil plow was to be used, or whether a greater depth of furrow than four inches was made at any time. We presume there is but little, if any land devoted to wheat in this country, where so shallow plowing would be advisable.

BEES WITHOUT STINGS.—The inquiry is often made whether there are bees without stings. We are not able to say where any of this species can be found at the present time. The late Dr. JAMES THATCHER, of Plymouth, Mass., in a letter published in the *New England Farmer*, in 1830, describes some of these curious insects then in possession of the late Dr. HOSACK, of Hyde Park. He says, "Dr. H. is now in possession of a family of bees without stings, which were sent to Dr. Mitchell from Mexico. He keeps them in his green-house that they may enjoy an atmosphere similar in temperature to that in their native climate."—Can any one give us any information in regard to these bees?

PROPHECY.—The Hon. JOHN LOWELL, in an address before the Massachusetts Society for promoting Agriculture in 1818, made the following remarks in reference to the connexion of chemistry with agriculture. They evince the wisdom and sagacity of an able mind. "There are few persons who have read the late able and interesting work on agricultural chemistry, by Sir Humphrey Davy, who do not perceive its intimate connexion with this important art, or who do not feel a prophetic conviction of its future usefulness." Mr. Lowell went on to say that though he regarded this as a subject with which the practical farmer need not trouble himself, lest he should become "confused and bewildered," yet he thought there was "reasonable ground of hope, that men of leisure and science would be led to more accurate and philosophical views of agriculture, and that from their experiments, their neighbors would derive great ultimate advantage."

LEAVES FOR LITTER AND MANURE.—Leaves of trees furnish the best of bedding for pigs. A good thickness of them enables the animal to cover himself completely and he sleeps warm and comfortably under almost any degree of cold. They make a good and convenient litter for horses or cattle—readily absorbing the liquids, and at the same time affording a soft and clean resting place for the stock. A covering of them affords an excellent winter protection for plants, and they also make a valuable compost for plants that will not bear the salts of animal manures. A mould prepared by mixing old grass turf and leaves, well rotted, is known to be excellent for many gardening purposes.

Now is a good time to gather leaves, and people living near woods free from under-brush, can readily procure them, in any quantities. The winds frequently collect them into piles, in vallies, and along the sides of fences, where they can be easily collected and carried to the farm-yard in carts or waggons. They may be deposited for use, as needed from day to day, in any spare corner of an out-building, or thrown into a slight pen made of boards or rails, and kept dry by boards over the top.

HOW MUCH LIME OUGHT A SOIL TO HAVE?—Prof. JOHNSTON considers that a proportion of lime is indispensible to the fertility of a soil. He thinks that the proportion of three per cent. of the carbonate, (or common lime-stone,) is not too much, and that there are not many cases in which it would be advisable to increase the quantity beyond six to ten per cent., provided, the carbonate is in a sufficiently minute state of division.

"BOOK FARMING."—Samuel Williams of Waterloo, says, "I know a farmer, who has paid over $300 for a private library, and who takes both the *Albany Cultivator* and *Genesee Farmer*. In proof that he is something more than a theoretical farmer, he sold the surplus products of his farm last year for over $1400, and he paid out of the same but $90 for hired help—he has no children old enough to work in the field. It is hardly necessary to say that he is fully up to the improvements of the age."

LARGE DAIRY.—Col. Meacham, of Pulaski, N. Y. had a farm of 1,000 acres, 300 in grass, keeps 97 cows and made one year 30,000 lbs. of cheese. He raised yearly 2,000 bushels of carrots for his cows, and gatherd 300 bushels of grass seed.

BIG CORN FIELDS.—H. L. Ellsworth, late commissioner of patents, has a thousand-acre corn field, yielding 60,000 bushels of corn, in the Wabash valley. Other fields, amounting to 5,000 acres, are adjoining.

The Season and the Crops in New-Hampshire.

"The harvest is past," and the fruits of the earth are gathered in. A retrospect of the past year, at the present time, may be of advantage as comparing one year with another, and different localities with each other, and as forming a record to which reference may be had in after years.

The last winter was remarkable in this region for mildness. January 1st, there was no snow, and no frost in the ground. There was much rain, some snow, a few days of severe cold, and but few weeks sleighing during the winter. April was dry, but May was remarkably wet, it being rainy nearly half of the time. This delayed sowing and planting, but was of great advantage to grass, for without it the hay crop would undoubtedly have been very light, owing to the unfavorable winter. Planting was not completed before the first week in June. The first and second hoeings were crowded together, and done in haste, as we were obliged to commence haying early. The weather was favorable, and the crop, which was unusually large, was secured in good order.

Wheat blighted badly, some pieces not worth harvesting. It was also injured by the worm, *Cecidomyia tritici*, in the head. A very light crop. Oats good, and the grain heavy. Corn that was planted late was injured by the early frosts in September, but in general there is an average crop. Potatoes good, and but little diseased, though in parts of Merrimack and Belknap counties we hear the disease is prevalent, and very destructive. Peaches and plums none, and of apples there is a limited supply. W. L. EATON. *East Ware, N. H., Nov.*, 1848.

Agricultural Exhibition in Canada West.

The third meeting of the Provincial Agricultural Association of Upper Canada, took place at Cobourg on the 5th, 6th and 7th of October last. The unfavorable state of the weather during the days on which the entries were required to be made, prevented much stock and many articles from being brought forward. Still the show is pronounced creditable to the cause of agricultural, mechanical and general improvement. Durham cattle from the herd of Hon. **Adam Fergusson**, and Devons from **Richard Gapper**, Esq., are mentioned as being very fine. The show of implements was quite large. Several of the exhibitors were from "the States," among which were Messrs. **Emery** of Albany, and **Rapelje** & **Briggs** of Rochester. There was a good display of horticultural products, among which some samples of grapes were pronounced of superior quality.

Crops in East Tennessee.

The great improvement in farming in this valley of East Tennessee is truly gratifying. Many old fields which have been turned out for years, are now under fine cultivation.

The farmers are now gathering their corn, which crop is most abundant. The wheat and oat crops were remarkably fine for this country. Wheat is now worth from 40 to 50 cents per bushel; corn, owing to its great abundance, will range one shilling to twenty cents this fall. There has been introduced among us, within the last two years, a variety of wheat called by some the Quaker wheat, by others the Mediterranean, which is decidedly preferable to the wheat we have used here for many years. Our wheat crops are often destroyed by the Hessian fly in the fall, or rust in spring. The Quaker wheat is never destroyed by either, and is therefore considered the more valuable. The grain is much larger than that of the Walker or Orleans wheat, but the flour is not quite so white. **Sam. T. Bicknell.**

Printed Circulars.

The other day a *sealed* note came from the post office, marked 10 cents. On opening it, not even the dot of a pen was visible on the inside, for it was a **printed circular**, which if left open as it ought to have been, would have drawn only two cents. Gentlemen, either save your wafers or prepay the postage. X.

Climate South.—Dr. Lee says that 9 inches of water have fallen in Savannah, in 3 successive days—that the mean temperature of the earth is 20 degrees greater in Georgia than in Western New-York—and that so much greater there is the growth of corn, that 16 to 25 square feet are required for the growth of each stalk of corn in the field.

Constituents of Wheat.—Professor Johnston found, according to analyses, that so far as the *fat forming principle* is concerned, that *bran* for a given weight, is the richest, and that the whole grain ground together is nearly one-half richer than fine flour. As to *muscle-forming* matter, the whole grain is to fine flour as 156 to 136.

Analysis does not, however, always show the actual comparative value, as some parts are assimilated much more readily than others—and the same food sometimes becomes twice as valuable by a different preparation.

One-horse Carts.—A great improvement has been made in attaching the horse to a horse cart, to prevent the sudden descent of the weight of the load upon the animal's back, after mounting obstructions. A half elliptic spring is fastened under each shaft, the centre of which is connected to the lower ends of the staple, which passes freely through a hole bored in the shaft, and connects with the chain that passes over the back of the horse.

AN ACROSTIC.

The Cultivator of "the soil and mind."
His course well chosen, cannot fail to find,
"Excelsior" his motto, well defined

Cheer'd on by honest labor's rich rewards,
Unawed by fortune's frowns, as Nature's LORDS
Let cultivators still their course pursue,
To "improve the soil," as they are *bound* to do—
It soon will be acknowledged as a right,
Viewed in a practical or scientific light:
As right, in honoring all the men of toil—
To honor most, improvers of the soil:
Our duty, then, should be delayed no later—
Respect our rights, and *take* The Cultivator.

Respectfully submitted by W. L. Eaton.

East Ware, N. H.

PRICES OF AGRICULTURAL PRODUCTS.

New-York, Nov. 15, 1848.

FLOUR—Genesee per bbl. $5.44a$5.50. Fancy brands, $5.62½a$5.87½.

GRAIN.—Wheat, Genesee, per bu., $1.25a$1.27—Corn. Northern, 70a74 cts.—Rye, 66a67c.—Barley, 62½a65—Oats 33a34c.

BUTTER—Best, per lb., 19a20c.—Western, dairy, 12a18c.—Ohio, 9a11c.

CHEESE—per lb., 6a7½c.

BEEF—Mess, per bbl, $9.25a$10.—Prime, $5.25a$5.50.

PORK—Mess, per bbl., $12.62½—Prime, $9.

LARD—per lb., 7½a8c.

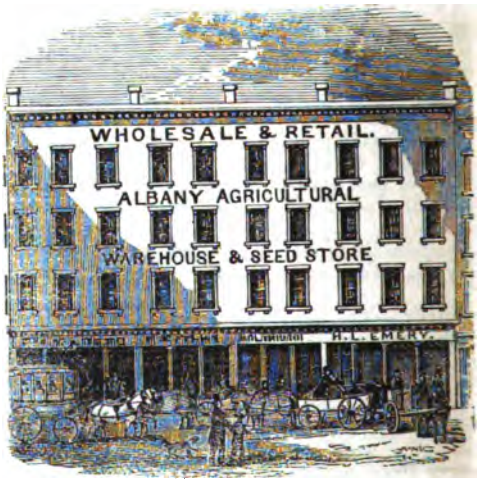
HAMS—Smoked, per lb., 6a8½c.

HEMP—American dew rotted, per ton, $155a$160.

TOBACCO—per lb, Kentucky, 3½a6c.

COTTON—Upland and Florida, per lb., 5½a6½c.—New Orleans and Alabama, 5½a7½c.

WOOL—Prime or Saxon fleeces, washed, per lb...	35a40 cts
American full blood fleeces,...............	31a33 "
" half blood,.....................	26a27 "
" one-fourth blood and common,.	23a25 "



ALBANY AG. WAREHOUSE AND SEED STORE,

Removed from stand No. 10 *and* 12 *Green-street, to the spacious new store No.* 369 *Broadway—a few doors South of the Post-Office, Albany, N. Y.*

THE subscriber, being a sufferer from fire, in common with a large portion of the citizens of Albany, (having lost his store and stock, on the morning of the 29th of Oct. last,) has secured for a term of years the new and extensive store, No. 369 Broadway, or old Market-street, a few doors south from the P. O. This store being 145 feet deep, and four stories high, is much larger than his former one,—and running through from Broadway to the canal basin—Broadway being the principal thoroughfare in the city, between the Boat Landings and Depots, the location is readily found. These advantages, with the increased facilities, will enable him to transact many times the business heretofore done by him, and more convenient for the trade generally

In connection with these changes, he is erecting an extensive manufactory in the central part of the city, sufficiently large to accommodate over 100 mechanics, and a proportionate amount of labor-saving machinery, which will enable him at all times to execute all orders with despatch. And he solicits the continuance of that very liberal patronage heretofore bestowed upon his establishment.

H. L. EMERY.

N. B. It is his intention to establish branches at Rochester and Buffalo the coming spring, each to be under the charge of experienced brothers of the subscriber.

LIST OF AGENTS FOR THE CULTIVATOR.

(Concluded from page 369.)

NEW JERSEY.

Augusta, W. H Roe
Burlington, Thos. Hancock
Bridgeton, J. B Potter
Crosswicks, P. S. Bunting
Carpenter's Landing, Thos Heritage
Colts Neck, H Buck
Camden, B. W. Cooper
Columbus, J. W. Wright
Deerfield, A Padgett
Englishtown, W. D. Reid
Fairton, G. S. Whitecar
Flemington, J. K Demet
Glassboro, T. H. Whitney
Greenwich, B. Sheppard
Griggstown, A. Van Doren
Howell Works, A. Lafetra
Jacksonville, S. T. Duffy
Kingwood, J. T Risler
Lesser Cross Roads, Jos. Nichols
Metuchin, Wm. M Ross
Mendham, D. B. Williams
Medford, Geo. Haines
Millville, F. L. Mulford
Mount Holly, G. W. Parker
Moorestown, C. Stokes
Middletown Point, N. Hillyer
Madison, Wm. J Britton
Middletown, Thos. Roberts, Jr.
Newark, Ritchie & Eadie
New Market, Abel Vail
New Brunswick, H. Smalley
Newton, J. R. Pettit
New Vernon, S. Lindsey
Perth Amboy, Jas Parker
Plainfield, W. W. Cornell
Princeton, Jas. Carnahan
Paterson, John Home
Quakerstown, T. Probasco
Rancocas, H. W. Wills
Rahway, J. Shann
Roadstown, R. Fithian
Shiloh, A. Muich
Squankum, H H Wainwright
Spotswood, John D. Outcalt
Shrewsbury, J. Corliss
Stewartsville, Wm. S Kase
Sergeantsville, J. Lessey
Trenton, D. K. Schenck
Tom's River, W. McKean
Tinton Falls, Thos Guest
Woodbridge, E. I. Jacques
Yardville, J. J. Woodward

PENNSYLVANIA.

Allegany City, Chas Anderson
Abington Centre, S. Tillinghast
Allentown, D. C Freytag
Addison, Robt. Hunter
Athens, Sam'l Ovenshire
Bethlehem, C. C. Tombler
Brownville, J. L. Bowman
Berwick, Rev. J H. Young
Bethany, E. W. Hamlin
Brooksville, John Bullers
Byberry, E. Crossdale
Bristol, Sam'l Hulme
Butler, A. M. Evans
Beaver Plain, D. Minis
Bridgewater, A Stackhouse
Bloomsburgh, Geo. Yost
Beallsville, W J. Hill
Chambersburgh, B. Chambers
Centerville, A. Cornell
Carlisle, Sam'l Myers
Canaan, D. Swingle
Cattawissa, Wm. I. Eyer
Chanceford, Jas. S. Fulton
Conneautville, Chas. B. Power
Colebrookdale, J. Schultz
Curwinsville, John Miles
Coopersburgh, C. Wittman
Connellsville, Joe Herbert
Dundaff, J. Mc. Alla
Darlington, John Smart
Danborough, Chas. Smith
Equinunk, Wm Weston
Eastbrook, Wm McCoslin
Easton, H. W. Crosby
Erie, T. Moorehead, Jr.
East Smithfield, Allen Hale
Elkland, Thos Allen
Fairview, M. Barnett, Jr.
Farmington, John Detwille
Friendsville, Sam'l F Carmalt
Fayetteville, John Darby
Forkston, E Fassett
Greensburg, D. Weltz
Gap, Jos. Brinton
Honesdale, G. L. Griffing
Hanover, Peter Forney
Hulmeville, A. N. Scott
Herriottsville, Jno McEwen
Hamlinton, B. Hamlin
Harthgig, Geo. Siddall
Harbor Creek, C. Leet
Harveys, S. Harvey
Hopewell Cotton Works, E. J. Dickey
Huntsville, D J Whiteman
Harewood, Wm. Main
Horn Brook, Wm. J. Delpueck
Hill Top, O Stevenson
Harford, P. K Williams
Jefferson, John Cotterell
Kingston, E Hoyt
Kulpsville, C. L. Wampole
Kinzers, A. L. Henderson
Lancaster, G. Baker
Lewisburg, S. F. Lyndall
Lahaska, Wm. Staveley
Leighton, Ed. Weiss
Lawrenceville, W. Kilburn
Lewiston, L. T. Mattson
Lumberville, Wm. J. Jewell
Leraysville, E. Marsh
London Grove, J. P. Swayne
Mauch Chunk, Sam'l. Lippincott
Maiden Creek, Jos. Wright
Muncy, B. M. Ellis
Marshalton, John Worth, Jr.
McConnellsville, R M. Denig
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Newportville, A. M. McIlvaine
Newtown Square, L. Brooks
North Whitehall, E. Kohler
North East, Jos. McCord
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Pineville, J. Simpson
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Pleasant Mount, O. Stevenson
Pleasant Valley, J. M. Sands
Priceville, M. Mogridge
Pleasant Unity, Alex. Culbertson
Piqua, T. W. Henderson
Pike, D. Lobach
Prompton, Hon. V. Grenell
Pittsburgh, M. P. Morse
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Ryerson's Station, J. K. Loughridge
Richborough, Jos. Thompson
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Selona, Wm. Pearon, Jr.
Starrucco, Hon. J. Mumford
Fetzlers' Store, Dr. A. Bush
South Sterling, Rich. Lancaster
Shepherdstown, D. Sheffer, P. M
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Steeleville, Joshua Wood
Spring Creek, S. Eaton
Springtown, D. W. Hess
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Tarentum, D. McLain
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Waynesburgh, J. Higginbotham
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Summit Bridge, J. A Lune
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Centreville, John Tilghman
Churchville, Wm Finney
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Rockingham, S W. Covington
[illegible]ky Mount, Wm. S. Battle
[illegible]ains, Tyre Glenn
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Salisbury, Wm Locke
South Mills, Wm. Old
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Topsail, J. D. Jones
Tarboro, Robt. Norfleet
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Cheneyville Hugh Caslin
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Donaldsonville, R. McCall
Jackson, D. McCanto
Kisatchie, Thos. Brown
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Mansfield, J J. B. Prudhomme
Monroe, Dr. John Calderwood
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The Farmer, the Gardener, and the Fruit-Grower,

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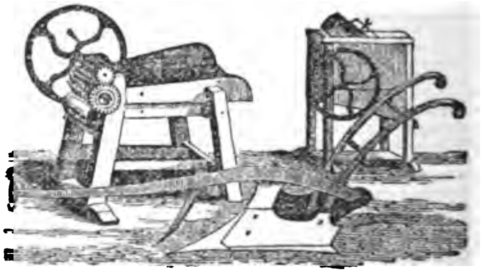

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